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"PEPSALIA" is now perfectly White, Odourless, and Stable.

We guarantee "PEPSALIA" to remain good for an indefinite period, and will change every Bottle returned to us free of cost to the sender.

"PEPSALIA" is pure, reliable, good, and will not deteriorate. It is the very best of digestives, and no substitute is or can in any way be equal to it.

Our scheme for securing a profit of 3d. net on every Bottle of Pepsalia 1/- size sold at the cutting price of 10d., or 3/- on every dozen—that is, 40% on the outlay—makes it a most profitable article for every Chemist to keep and to push. Write for a copy of scheme.

Stock a few dozen of Pepsalia and see how well you will be repaid. No one can undersell you, and there will be no more cutting. Our arrangements protect you.

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Net profit of 6/- on your outlay of 15/.

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If you sign our Non-cutting Agreement, Pepsalia will only cost you 7/6 per dozen 1/- size, and 15/- per dozen 2/- size.

Don't wait till your present stock has run out, but send for an Agreement at once.

We sent out our circulars only a week ago, and more than five hundred Chemists have already signed our Agreement, and a great many of them compliment us on our new system for protecting them against "Cutters."

Write for an Agreement at once.



The principal wholesale houses have signed our Agreement. We will publish list next week.

You can obtain your supplies through them or, *if you send cash with order*, direct from us.

In either case you will receive the bonus on every 15/- worth of goods bought at one time and in one consignment, provided you have signed the Agreement.

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2. You are able to make 3d. net on every bottle.
3. No one can undersell you.
4. You are selling a Genuine Article of High Reputation, which will both please and satisfy your Customers.

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Is a fluid extract of prime CASCARA SAGRADA, from which the bitter principle has been removed and the product aromatised and sweetened. It is the only fluid extract which is sweet in taste, and it replaces all so-called tasteless, bitterless, and palatable fluids, of which the bitter taste is only slightly modified, as well as all of the Cordials, Syrups and Elixirs of Cascara, which are only dilute mixtures of Cascara, and but one-eighth its strength. It fills a long-felt want, and is being prescribed by physicians everywhere.

In 1-lb. Bottles, 5/- per lb. net; 5-lb. Bottles, 4/7 per lb. net.

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AN ENTIRELY NEW and ORIGINAL PREPARATION which contains 25 per cent. of pure Cod Liver Oil, as represented by its active medicinal constituents, Morrhine, Butylamine, Amylamine, Iodine, Bromide and Phosphorus, all of which are contained in its true alcoholic extract.

Modern investigation has proven that the value of Cod Liver Oil as a medicinal agent is not due simply to the fact of its being an oil, but to the valuable active principles which it contains, as noted above.

Each fluid ounce of the Wine contains four grains of **PEPTONATE OF IRON**, the most readily assimilated and most valuable of all forms of Iron, it being partially predigested and free from styptic properties.

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A Superior Pepsin in Scales prepared by a New and Original Process of the highest Digestive Power.

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Students who failed at the late Examination should join at once for the January Examination. Fees—MAJOR, £4 4s.; MINOR, £6 6s.; PRELIMINARY, £2 2s.

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MAJOR	...	3 months, £5 5s.	...	Until passed, £10 10s.
MINOR	...	" £8 8s.	...	" " £15 15s.
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RESULTS OF OCTOBER EXAMS.

Two Majors sent in: both passed.

Mr. J. P. NORWOOD, Conisbro'. | Mr. FRED HELSBY, Liverpool.
N.B.—All of our Majors, except one, have passed at first attempt.

The following 5 gentlemen passed the Minor:—

Mr. GARDNER, Sheffield. | Mr. QUENET, N. Shields.
" PEAT, Mansfield. | " HARRISON, Sheffield.

Mr. SCOTT, Durham.

A Short Course for the January Exam. opened on November 5.

The Full Course for the April Exam. opens on January 3.

Write for Prospectus to the PRINCIPALS, 118 Princess Buildings, The Moor, Sheffield.

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{ Mr. L. COOPER, F.C.S., F.R.B.S., &c.

The term commenced on **MONDAY, SEPT. 4, 1893.** This School is fitted up with every convenience for Pharmaceutical Students, and the utmost endeavours are made by means of individual attention to secure a successful issue.

Extra Lectures are given throughout the course, and for reference Students are requested to apply to any past Students.

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(CONSULTING CHEMIST.)

Late Mr. J. S. WARD.

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Students entering for a course of instruction at this School may rely upon receiving every attention from the Principal, and on receiving training which will enable them to pass the Pharmaceutical Examinations with ease.

At the recent October Examination, seven students presented themselves for examination from this school. Six passed, thus attaining the unusually high percentage of 86.

The following gentlemen passed:—

Mr. A. S. BARR, Liverpool,	Mr. W. R. ROBINSON, Barrow-in-Furness,
" C. MOON, Ilfracombe,	" S. B. STEAD, Widnes,
" C. H. OSMOND, Southsea,	" G. T. WILLIAMS, Tregarth,

Syllabus, with full particulars, may be had, post free on application to the Principal.

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OF PHARMACY,
162 KENNINGTON PARK ROAD, LONDON, S.E.**

Principal, W. WATSON WILL, F.C.S.

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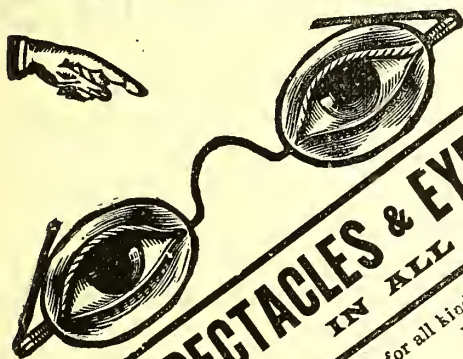
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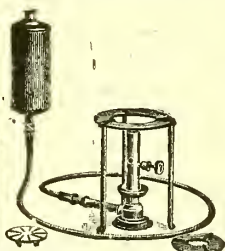
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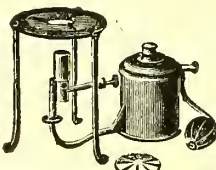
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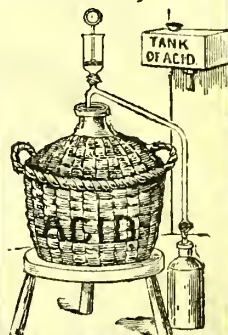
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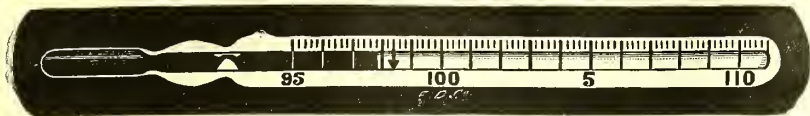


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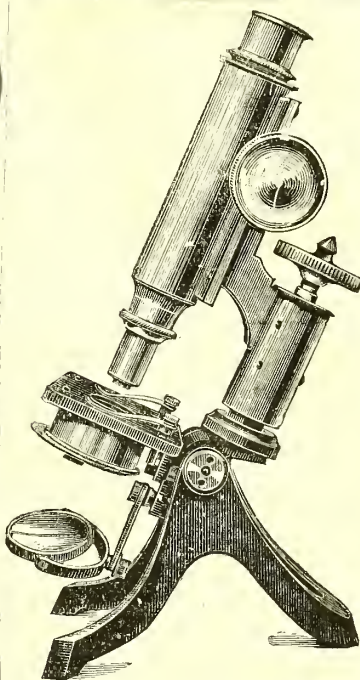
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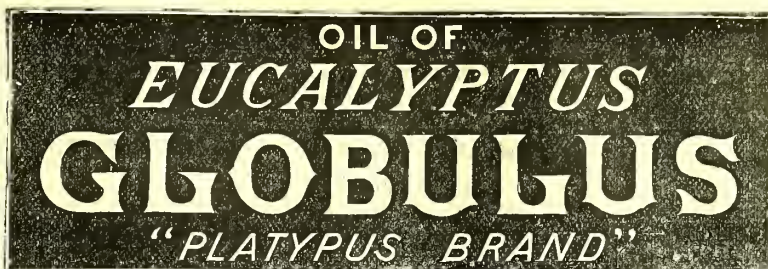
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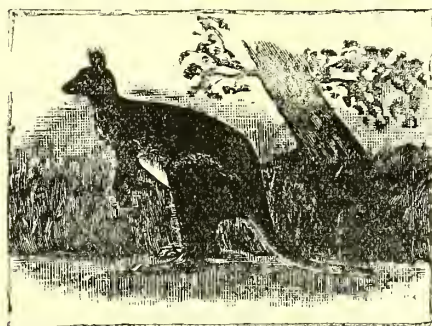
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Is admitted to be the Purest Eucalyptus Oil yet introduced to the public.
To be obtained of your Wholesale Druggist.

SOLE CONSIGNEES—LAUGHLAND, MACKAY & BAKER, 60 Lime St., LONDON.

COLONIAL ADDRESS—A. M. BICKFORD & SONS, WHOLESALE DRUGGISTS, 46 CURRIE STREET, ADELAIDE.

EXCHANGE COLUMN.

This Section of "The Chemist and Druggist" must be closed for press by Wednesday morning's post of each week. Remittances payable to EDWARD HALSE.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin's Bank (Limited)."

FOR DISPOSAL.

Formulae.

For sale, 130 well-tryed recipes, neatly copied in book, post, 1s. 6d. Tully, Chemist, Hastings. Cough-mixture, without poison, cost 5d. lb.; elegant, pleasant, brilliant, efficacious; recipe, 2s. 6d.; gripe-mixture, equally good, same price. "Chemist," 154 Princess Road, Moss Side, Manchester.

Educational.

Microscopic slides, medical, educational, interesting, from 2s. 6d. dozen; sample and lists, 3d. G. T., Kilburn Dispensary, W. Masprat's "Chemistry," 2 vols., good condition, price 21s.; Taylor's "Medical Jurisprudence," fair condition, 4s. Harrison, Ashwell, Herts. Cassell's "Natural History," 4 vols., unbound, 10s. 6d.; Miller's "Chemistry," 3 vols., many coloured plates of cube system, unique, 21s. Davies, Pearce's, Chemist, Edmonton.

Drugs and Chemicals.

What cash offers? 5-oz. original bottle Warrick's V.V.F. otto. Laxon, Chemist, Faversham. Two 1 lb. iodoforn (Schering's), 14s. 6d. per lb.; 1-lb. cryst. iodoforn, do., 14s. per lb.; 2½ lbs. iolin. resublim., 12s. 6d. per lb.; ½ lb. croci stig. opt., 24s. per lb.; 7 lbs. hyd. subchlor. (Howards'), 2s. 6d. per lb.; 3½ lbs. pot. iodide, 11s. 3d. per lb.; 7 1-oz. bottles Smith's morph. mur., 5s. 3d. per oz.; 2 lbs. soda salicylas (Schering's), 5s. 6d. per lb. "Rhef," 41 Gayhurst Road, Dalston.

Shop Fittings.

Drawers, mahogany fronts with glass labels and glass knobs, shelving, pilasters, cornice, and lockers complete, 12 ft. long, 12s. 10s.; another lot to match 14 ft. long, with mirror cupboard in centre, 18s. 10s.; and one 16 ft. long, with plate-glass case at each end, and mirror cupboard in centre, 25s. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

72 excellent solid mahogany drawers, gold labels, crystal amber colour knobs, never been used, price 8s. 10s.; twelve handsome pear-shaped show-carboys from 2s. to 18s. each; twelve showcases, several ointment and pill jars, N. and W. mouth bottles, counters, and many other articles cheap. Heap, Chemist, Ashton-under-Lyne.

Counters, 2, mahogany tops, with plate-glass cases in front, 12 ft. long, price 10s. each, and 1, 6 ft. long, 5s.; also 12 ft. panelled-front counter, mahogany top, 90s. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Dispensing-screen, very handsome, 7 ft. long, mirror centre, plate-glass fronted counter under same, equal to new, price 15s. 10s. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Two enamelled specie-jars, with covers, figs. 246, 247, York Glass Coy.'s list, largest size. "Kappa," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Miscellaneous.

Male urinal, day and travelling, never used, 7s. 6d. Cammack, Chemist, Fulham.

Balance by Oertling, under shade, beam 12 in., pans 4 by 1½, complete, weights; scarcely used; cheap. Forbes, 11 London Street, Fenchurch Street, E.C.

For sale, No. 1 Oertling's short-beam balance, 8 in. beam, to weigh 100 grammes, turning with 0.1 milligramme, agate knife-edges on agate planes, double rider slides, polished mahogany glass case, pan supports, set of weights (50 grammes to 1 milligramme), with riders, in mahogany box, new, 9s. J. L. Newbigin, Chemist, Alnwick.

Sale, stock of druggists' sundries: also chemist's shop-furniture, glass case, drawers, counters, &c. "Theta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED.

Attfield's "Chemistry," recent edition. Ashwin Tiddington, Stratford-on-Avon.

Attfield's "Chemistry," Edmond's "Botany," Reed, 41 Nightingale Lane, Clapham Common.

Directory of Chemists and Druggists: state edition and lowest price. Harrison, Ashwell, Herts.

Directory of Chemists and Druggists, 1893 issue; state lowest price. H., 16 North Street, Wandsworth.

1,000 cap. papav. Sample to "Chemist," Heckington, Lincs.

✠ SHOP FITTERS,
SHOWCASE
MAKERS.

✠ NATALI & CO.

40 GRAY'S INN ROAD, HOLBORN,
LONDON, W.C. ✠

CHEMISTS' SHOP-FITTINGS, SHOWCASES, AND UTENSILS:
OF ALL DESCRIPTIONS, NEW AND SECOND-HAND

Chemists commencing, opening Branches, or making alterations, can be fitted throughout immediately, and save 25 per cent. by purchasing from our extensive stock.

SPECIAL JOB LINES ON VIEW THIS WEEK.
Showcases, Dispensing Screens, Desks, Carboys, Specie Jars, Shop Rounds, Nests of Drawers, Ointment Jars, &c., &c., Half Price.

PETROLEUM JELLY

WHITE, RED AND YELLOW

TRADE MARK

BEST AND PUREST

CONFORMS TO ALL REQUIREMENTS OF B.P.

AND PRONOUNCED BY THE MEDICAL PROFESSION TO BE UNSURPASSED.

Extract from Analytical Report of Dr. S. Rideal, F.C.S., F.I.C., F.G.S.

"Practically tasteless and free from smell, contained no fat or resin, * * * carefully manufactured."

SNOWDON, SONS & CO., MILLWALL, LONDON, E.

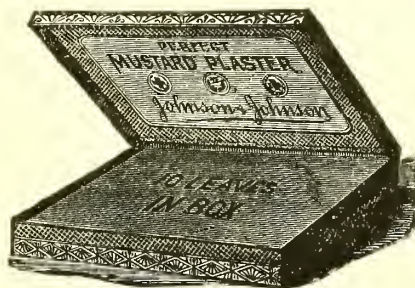
JOHNSON & JOHNSON,

NEW YORK & LONDON.

MUSTARD PLASTERS.



By our new process of manufacture we have overcome the great fault of ready-made **MUSTARD PLASTERS**, viz. :—Decomposition by age, and consequent inertness. Our Mustard Leaves are the Strongest and Best, will give **PERFECT SATISFACTION** to your customers, and are the most profitable to you.



AN IMPROVED CANTHARIDAL PLASTER

The only perfect Vesicant.

Vesicates in half the time of other Vesicants.

Is easily applied.

Does not become inert with age.

PAINLESS.

PROMPT.

CERTAIN.

IMPROVED BELLADONNA PLASTERS

(WITH BORACIC ACID).

INCREASED ACTION.

We have succeeded in greatly increasing the therapeutic value of Belladonna Plasters.

FIRSTLY.—By preparing the mass in a manner calculated to promote a more rapid absorption of the incorporated drug.

SECONDLY.—By employing a more reliable extract of the drug than is commonly used.

THIRDLY.—By the addition of Boracic Acid and a mild rubefacient, by which the activity of the cutaneous glands is stimulated, and their power of absorption increased.

Samples to any Physician's or Chemist's address on application.

Specify **JOHNSON & JOHNSON.**

JOHNSON & JOHNSON (LIM.), 12, LONG LANE, LONDON, E.C.

When Ordering care should be taken to Specify **JOHNSON & JOHNSON'S** Manufacture.

JOSEPH WATSON & SONS, MANUFACTURERS OF GLYCERINE

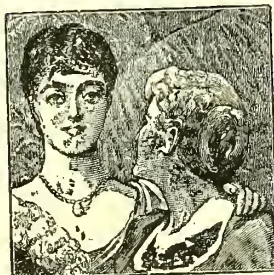
DOUBLE DISTILLED CHEMICALLY PURE 1260 Sp.G.,

ALSO FOR
NITRO-GLYCERINE AND OTHER MANUFACTURING PURPOSES.

PACKED IN 10 AND 5 CWT. IRON DRUMS, TO BE RETURNED, AND IN 56 LBS. TINS FREE.

WHITEHALL SOAP WORKS, LEEDS.

USED BY ROYALTY.



IVOIRINE COMPLEXION CREAM

Removes Wrinkles, Superficial Eruptions, Irritation, Inflamed Eyelids; Heals Burns, Cuts, Bruises, Insect Bites, and is invaluable for Eczema.

Highly recommended by "LANCET" and Dr. STARTIN.

Miss ELLEN TERRY says: "nothing can compare with it."

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Prevents Baldness and Greyness, removes Dandruff, stimulates vigorous Growth, and imparts a softness and glossiness unrivalled by other preparations.

PEARLINE Dentifrice preserves Teeth, renders them pearly white, and gives delightful fragrance to the breath.
CREAM and BALSAM, 1/6 each. PEARLINE, 1/. Proprietors—

BAILEY'S TOILET COMPANY, BEDFORD.

Wholesale Prices:—

CREAM and BALSAM, 12/- each; PEARLINE, 8/- per dozen.

OKELL'S ORIGINAL MONA BOUQUET.

(First introduced by the late JOSEPH OKELL.)

Registered Trade Mark, "DOUGLAS PIER."

The most popular and best-selling Perfume in the market.

Retail Prices, 1/-, 1/9, 3/6, 6/-, 7/6, 10/6 per Bottle.

ALSO 3d. SAMPLE BOTTLES.

Shippers and Wholesale Buyers supplied on the best terms by

THOMAS WEST, 1185 & 1187 CHESTER ROAD, MANCHESTER. STRETFORD.

"PRICE'S GLYCERINE"

(Originally introduced in 1855).

Guaranteed free from ARSENIC

and all other impurities.

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GENUINE EAU DE COLOGNE

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2-oz., 7/6, 4-oz., 14/;

1-pints, 21/-, pints, 42/-; quarts, 84/- per doz

The second largest sale amongst Chemists in the U.K.

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WHOLESALE DRUGGISTS,

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GELATINE-COATED DOG AND FOWL PILLS.

SAMPLES FREE.

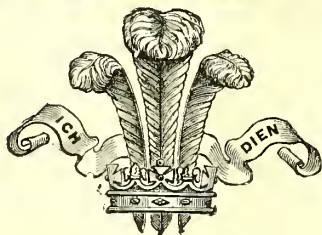
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**GABRIEL & TROKE'S
GELATINE CAPSULED
HORSE BALLS.**

Alterative, Condition, Cordial, Coug
Diuretic, Fever, Physic, Worm, Quini
Tonic Balls (Registered 81,291).

20 HIGHEST AWARDS.

Pears' Soap

Soap Makers
by Appointment to



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The Prince of Wales.

RETAIL PRICES.	6d.	SIZE, unscented	-	-	-	4s.	WHOLESALE PRICES.	
	1s.	„	all shapes, Washing or Shaving					8s.
	1s. 6d.	„	Ditto	ditto				12s.
	2s. 6d.	„	(The Washing Tablets are perfumed with Otto of Roses)					20s.
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TRANSPARENT GLYCERINE		2s.	per Box of 3 Tablets			16s.	Per dozen Boxes.	

DISCOUNT of 20 per Cent.

On all ORDERS of NOT LESS than £5.

(GROSS TRADE-PRICE VALUE.)

If accompanied by Remittance,

[Lesser Quantities 15 per Cent. Discount only.]

IMPORTANT STATEMENT.

No Dealer in the Kingdom, "Wholesale or Retail," for any quantity whatever obtains more than the above 20 PER CENT. Discount.

(Signed), *A & F Pears, Ltd.*
71-75, NEW OXFORD STREET, LONDON, W.C.

E. WITROFSKY,

Drug and Chemical Merchant,

22 FENCHURCH ST., LONDON, E.C.

PURITY GUARANTEED.

Oleum Absinthii, Amygdalæ Dulcis, ditto Essent., Anisi (H. & W.), Bergamotæ, Caryophylli, Cognac, Coriandri, Geranii (Vimard & Co.), Iridis (Vimard & Co.), Juniperi, Lavendulæ, Limonis, Menth. Pip. (H. G. Hotchkiss), Pini Pumilionis, Sylvestris, Rosmarini, &c., &c., &c.

OTTO OF ROSE (Pure Virgin).

SPECIALITIES:—

CARAMELINE (substitute for Burnt Sugar). 20 times stronger than Caramel.

SOLUBLE ESSENCE OF ORRIS (Maubert Fils & Vimard).

CONCENTRATED PERFUMES, POMADES, FLOWER-WATERS.

Carbolic Acid, Liquid, 25 per cent.

Carbolic Acid. .. 50 ..

Carbolic Acid, Liquid, 95 per cent.

Carbolic, Crystal, 35° to 70°.

SOZIO & ANDRIOLI

ESTABLISHED A.D. 1757.]

GRASSE (Alpes Maritimes), FRANCE.

Neroly, Lavender, Geranium, Orris, Patchouly, Thyme, Rosemary, Spike, Santal, &c.

CONCENTRATED PERFUMES.

CONCRETE ESSENTIAL OILS.

FLOWER POMADES at the highest possible Saturation. ROSE & ORANGE FLOWER WATER, Sweet Almond Oil.

London Agent—MR. FREDK. BOEHM, 4 CULLUM ST., E.C.

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Dunster House Mining Lane

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IMPORTER OF

Musk

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ESSENTIAL OILS



Wholesale
and
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APPLICATION
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AND

PRICE LIST

RICKSECKER'S PERFUMES

At the WORLD'S FAIR.

An Extract from the Special Report of "THE CHEMIST AND DRUGGIST," July 29, 1893.

PERFUMES form one of the most attractive features in the ground-floor section. A prominent and most artistic exhibit is that of THEO. RICKSECKER, of Maiden Lane, New York, which occupies a corner of the aisle as we approach from the north entrance. Here there is a series of eight cases decorated in green enamel and gold, forming a kind of wedge.

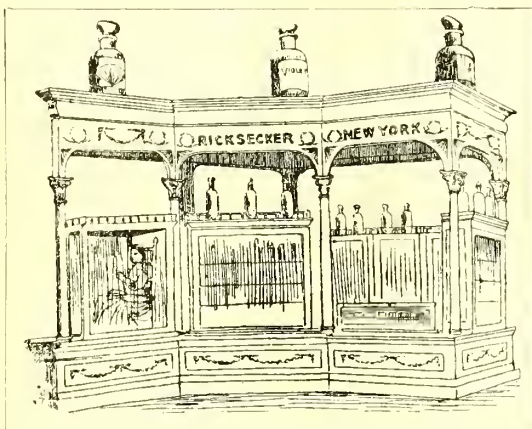
The apical case contains a figure of the woman most revered by all Americans—Martha Washington, the mother of the Republic. This figure is modelled in wax, and is, we believe, a true likeness. Martha Washington was a charming and lovely woman, and Mr. Ricksecker has not failed to do her beauty justice, for the dressing of the figure is as tasteful and elegant a costume as would serve for a royal wedding. This unique feature naturally attracts attention to the exhibit, and once the visitor begins to inspect it he finds many things to interest him.

There is a charm about the Ricksecker perfumes which is unusual: they are elegantly put up, both the shapes of bottles and the style of labels being quite *sui generis*. This is particularly noticeable in such perfumes as lavender-Cologne, sweet clover, and many others which might be named. The perfumes are displayed in magnificent vases and flasks as well as in the usual bottles for retailing, and they are set off by a selection of solid perfumes (sachets, &c.), which are also of elegant get-up.

In connection with these perfumes we may mention that the syndicate having the exclusive sale of per-

fumery at the Fair selected them as the only kind to be sold there, and the company which purchased the concession for selling perfumery through machines use them only in the 200 machines on the World's Fair grounds.

Besides perfumes the exhibit contains a good selection of toilet-preparations, such as tooth-powders, face-powders, reviving-salts, and soaps. There is a 165-lb. block of Ricksecker skin-soap on show which looks just like marble, and which, we noticed, was always dry whatever the state of the weather might be. This is a distinct innovation in toilet-soaps, for it eschews all the characteristics which are generally taken to imply attractiveness. For instance, it is not brightly coloured, nor is it scented—the oleaceous base is purely vegetable and in saponification the amount of alkali is rigidly hit off, and by subsequent treatment the soap is brought to a condition of strict neutrality. In appearance the soap looks well, for it



is milled five times, so that it comes out almost cream in colour, and the odour is not unpleasant. It gives a smooth but not abundant lather which can lie upon the skin for a long time without producing irritation, and its detergent qualities are excellent.

It will be noticed from the sketch that Mr. Ricksecker's exhibit is surmounted by three gigantic bottles of perfume, and we ought to add that the cases are so arranged as to form an office within which the attendant can receive visitors, who also have the privilege of writing letters in the office.

MANUFACTURED SOLELY BY

THEO. RICKSECKER, MAIDEN LANE, NEW YORK CITY.

English Agents—LYNCH & CO., LIM., Aldersgate Street, LONDON, E.C.



THE "BETROTHAL" BOUQUET. GROSSMITH'S NEW PERFUME.

A chef d'œuvre of the perfumer's art.

UNDER ROYAL PATRONAGE.

Dedicated by gracious permission to PRINCESS MAY (H.R.H. The Duchess of York)

N.B.—This entrancing Perfume is quite new, and possesses the rare quality of preserving its very *distinctive* and floral character throughout.

In attractive single cases, 21/-, 40/-, and 80/- per doz Sold by all leading Chemists and Perfumers.

J. GROSSMITH, SON & CO., Perfumers, LONDON.

COOK'S PURE TOILET SOAPS.

SPECIALITIES:—COOK'S SAVON DE LUXE. The most luxurious soap made.

COOK'S "RIVIERA" (SUPER-FATTED). Specially prepared for delicate and sensitive skins.

SPECIALITIES MADE FOR THE TRADE.

COOK'S GOLD MEDAL ANTISEPTIC SOAP. (Thomson's Patent.)

For curing and relieving Eczema, Ringworm, and all skin affections.

SIX PRIZE MEDALS AT GREAT EXHIBITIONS FOR EXCELLENCE AND PURITY.

Can be obtained through

Messrs. S. MAW, SON & THOMPSON, LONDON, or from E. COOK & CO., LONDON.

H. P. TRUEFITT'S SPECIALITIES FOR THE HAIR.

Floral Extract, 3/6, 5/-,

10/6, 21/-

Egg Julep, 2/-, 4/-

CONCENTRATED

Egg Julep, 2/6,

5/-, 10/6.

Golden Fluid,

10/6, 21/-

EUXURON,

1/6.

&c.

Stimulating Lotion, 5/-,

10/6.

Astringent and Tonic

Lotion, 5/-, 10/6.

Quinine and Arnica

Hair Wash, 3/6,

5/-, 10/6, 21/-

Arnica Wash,

3/6, 5/-,

10/6.

&c.

EUCHRISMA.
Combines in one clear fluid every valuable
Component both of a Hair Grease and Wash,
3/6, 5/-, 10/6, 21/-.

EAU RACINE.
For restoring the original colour of Grey Hair,
superior to all other Restorers, being perfectly
simple in its Composition. Price 6/-.

An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

BRILLANTINE

H. P. TRUEFITT'S TONIC TOOTH BRUSH

(BY ROYAL LETTERS PATENT.)

PRICE ONE SHILLING.

20 & 21 Burlington Arcade; 13 & 14 Old Bond St., London.

"EAU-HORN"

(REGISTERED TRADE MARK)

**THE CURE FOR
BALDNESS.**

Retail Price 5/- per Bottle.

Messrs. F. NEWBERRY & SONS, 1 King Edward Street,
London, E.C., will be happy to quote *most advantageous*
terms for the above, and Dr. Horn's other renowned
Specialities for the Hair.

**NAMES OF AGENTS WELL ADVERTISED.
HANDSOME SHOW CARDS, &c.**

The above goods enjoy an enormous and ever-increasing
sale in all parts of the World. Sole Proprietor—

O. E. HORN, D.Sc., Newport, I.O.W.



CALVERT'S INDIAN BATH SOAP

(REGISTERED),

Contains 15 per cent. of genuine Carbolic, which is the best
remedy for Sores, Insect Bites, Stings, Ringworm, Prickly
Heat, or other Skin Ailments and Parasitic Complaints.

Sold in Tablets, WITHOUT PRICE ON, at **2/-** per dozen Box
less usual Trade Discount.

F. C. CALVERT & CO., MANCHESTER,

HAVE BEEN AWARDED

60 GOLD AND SILVER MEDALS AND DIPLOMAS

For the Superior Excellence of their Preparations.

VINACOCA

Embracing the Therapeutic Properties of the **COCA** Plant, blended with the best Madeira.

The VINACOCA is carefully prepared from the best Coca Leaf only. (No Addition of Cocaine.)

ONLY ONE WINE (CHOICE MADEIRA)
ONE QUALITY (A 1)
ONE PRICE } **THE BEST & CHEAPEST ON THE MARKET.**



The best Restorative is
(Rolland's Coca Wine).

VINACOCA

The best Nerve Tonic is
(Rolland's Coca Wine).

VINACOCA

The best Renewer of Health is
(Rolland's Coca Wine).

VINACOCA

Sold in Bottles at 3s. 6d. each, or 40s. per dozen, Retail.
Usual Trade Discount. Pamphlets for distribution, carriage paid.

COCA is prepared in various forms: COCA WINE, COCA LIQUEUR,
COCA LOZENGES, COCA TABLETS, COCA ELIXIR, COCA TEA
COCA CHOCOLATE, COCA TOBACCO, &c.

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**THE FRENCH HYGIENIC SOCIETY, 5 CONDUIT STREET, REGENT STREET, LONDON, W.
HIRST, BROOKE & HIRST (LIM.), LEEDS,**

Manufacturing Chemists and Wholesale Druggists, Manufacturers of

ORANGE WINE

Of Finest Flavour and Quality, and specially suitable for the Preparation of Orange Quinine Wine.

PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopoeia.

MOST SUITABLE BASIS FOR QUININE AND OTHER MEDICATED WINES.

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POISONING.

To Avoid Poisoning
by Impure Water use
the Mawson Filter.

The Mawson Filter Co., Newcastle-on-Tyne, and all Wholesale Houses.

SPECIAL LINE—FEEDING BOTTLES.

GREEN GLASS, Plain Neck, best Black Rubber Fittings 20/6 per gross.
WHITE GLASS, Screw Neck, best Black Rubber Fittings 27/11 "
VEGETABLE IVORY RING SOOTHERS 8/6 "

Terms—Net Cash with order, packages free, delivered to rail or wharf,
London.

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SPONGE IMPORTERS.

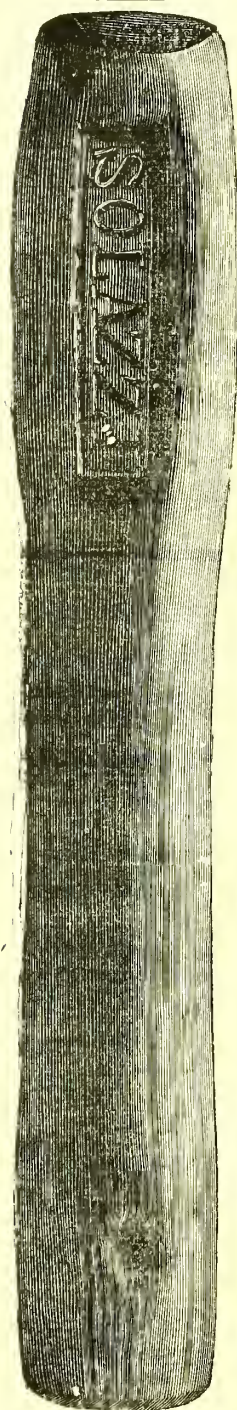
M. PETERSON & CO.

(Established 1870),

75 ST. ANNE STREET, LIVERPOOL.

FOR HOME, FOREIGN & COLONIAL MARKETS.

PURE LIQUORICE JUICE.



" SOLAZZI "

is the only Liquorice Juice universally acknowledged and prescribed by the Medical Profession.

" SOLAZZI "

possesses quality and flavour of a distinctive character, lacking in all inferior brands.

" SOLAZZI "

is certified by Analysis to be an absolutely Pure Extract.

" SOLAZZI "

is the Standard Article in the Trade.

Commended by the leading organ (*The Chemist and Druggist*) as "The most esteemed of all," and by *Health* (edited by Dr. ANDREW WILSON, F.R.S.E., &c.) as "By far the best and purest."

Of all Wholesale Houses.

Ask for Show Cards and Handbills.

INSIST ON " SOLAZZI. "

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., & 2s. each.

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 Eggs. In 1d. Packets; 6d., 1s., and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., & 1s. each.

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK.

For Painting Stoves, Grates, Iron, Tin, &c. 6d. & 1s. Bottles.

GOODALL'S LAVENDER WATER.

Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s., and 2s.

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ -pint, 1-pint, and Quart Boxes, 3d., 6d., and 1s. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES AND DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

SILVER MEDAL.

Square Glass Stoppered Bottles, containing nearly $\frac{1}{2}$ -pint Imperial, 42/- per gross. Sample Bottles at 7/- per gross.

23



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. Robinson, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

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Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

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Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

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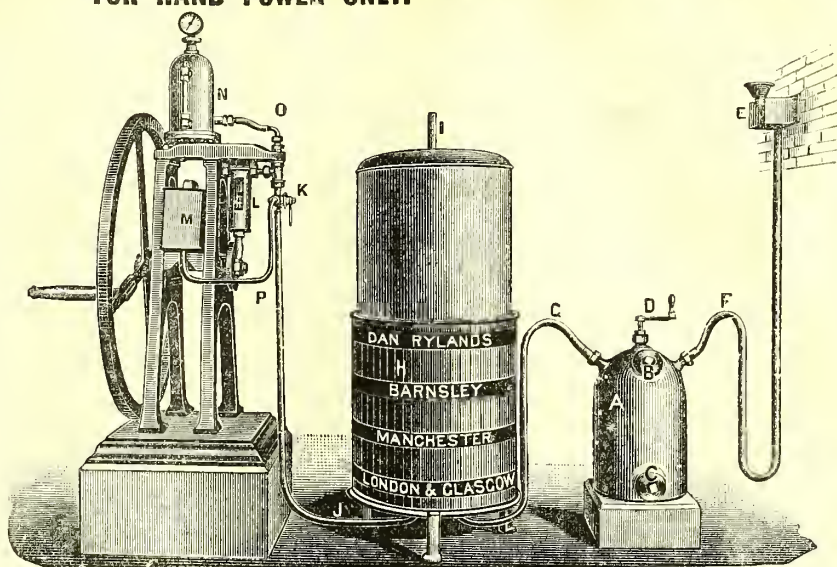
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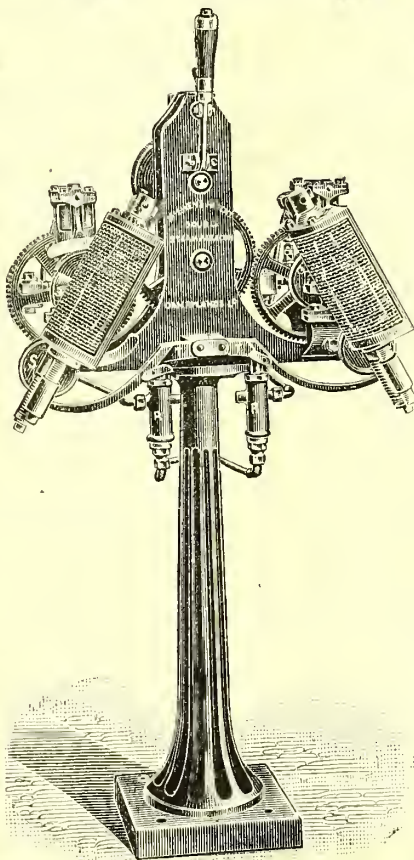
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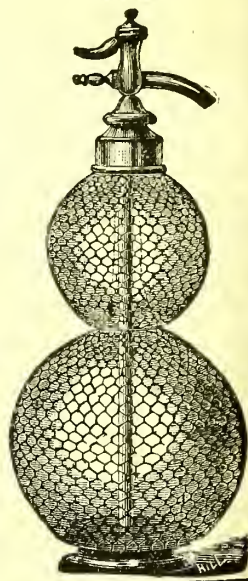
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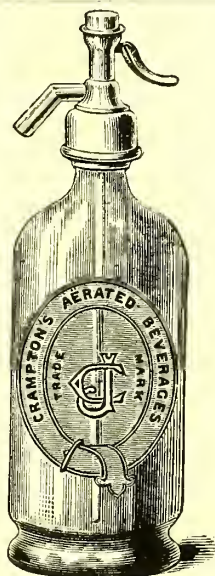
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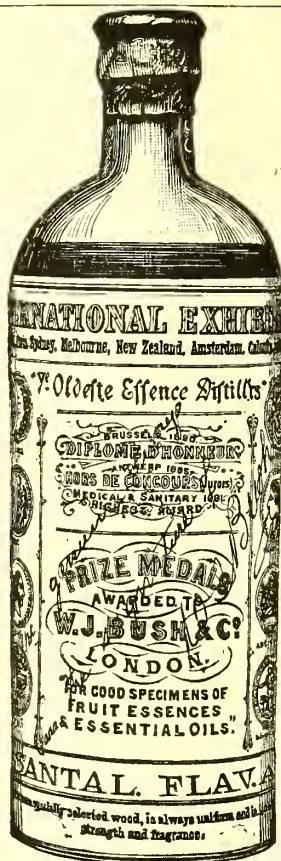
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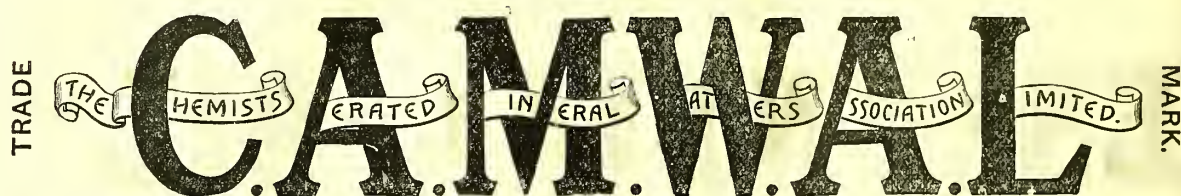
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Evans, Sons & Co.
Fletcher, Fletcher & Stevenson
Hearon, Squire & Francis
Hooper, E., & Co.
Lloyd T. Howard, & Co.
Moss & Co.
Potter & Clarke
Wright, Layman & Umney

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(Thermo Safe)
Chemists' Association, Lim.
Evans, Sons & Co.
Hearn, Wright & Co.
Hockin, Wilson & Co.
Kilner Bros. & Lynch & Co.
Marriott, E., & Co.
May, Roberts & Co.
Maw, S., Son & Thompson
Spence & Co.
Surrey Packing Co.

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Best Filter Co.
Fordham, W. B., & Sons, Lim.
Mawson Filter Co.
Silicated Carbon Filter Co.

FILTERS

Best Filter Co.
Fordham, W. B., & Sons, Lim.
Mawson Filter Co.
Silicated Carbon Filter Co.

FORMULA

Brooks, T.

FOOD (Infants & Invalid's)

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Brand & Co.
Chibnal, H. B.
Evans, Sons & Co.
Goodall, Backhouse & Co.
Hearon, Squire & Francis
King, F., & Co. (Lim.)
Lobing, Oester, & Co.
Lorimer & Co.
Mason, G., & Co., Lim.
Mellin's Food
Nestlé, H.
Midge, Dr.
Tyler, P.

GINGER ALE

Mills, R. M., & Co.
Roses & Sons

GLYCERINE

Bylton, Astley & Co. (Pastilles)
Boehm, F. | Fink & Co.
Fuerst Bros.
Price's Candle Co., Lim.
Watson & Sons

GOUT & RHEUMATISM

Bromley, C.

GRANULAR PREP.

Prout & Harsant (Blair's)
Bishop, A., & Sons
Bylton, Astley & Co.
Evans, Sons & Co.
Hearon, Squire & Francis
Lloyd, T. Howard, & Co.
Wright, Layman & Umney

GUM

Fink & Co. (Arabic, &c.)

HAIR PREP.

Anglo-American Drug Co.,
Chesebrough Co. [Lim.]
Edwards & Co.
Horn, O. E.
Klockecker, Theo.
Truett, H. P., Lim.

HERB BEER EXTS

Newhall & Mason

HOMOPATHIC

Keene & Ashwell
Leath & Ross
Thompson & Capper
Thompson & Wates

HONEY

Evans, Sons & Co.
May, Roberts & Co.

HYPHOSPHITES

Duncan Flockhart & Co.
Fellows

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Currie, W., & Co.
Tyler Rubber Co.

INHALERS

Burroughs, Wellcome & Co.
Hockin, Wilson & Co.
Sprinton, Co. The
Toogood, W.

INK (See MARKING INKS)

Bewley & Draper

INSECTICIDES

Rocks, Tompsett & Co.
Stearns & Co.

JANES & HOWELL

Rylands, Dan, Lim.

KETCHUP

Tyler, P.

KOLA PREPRTN

Christy, T., & Co.

LARD

Even, J., & Sons

LIME JUICE

Evans, Sons & Co.
Lorimer & Co. | Rose, L., & Co.

LINT

Liverpool Lint Co.
Maw, S., Son & Thompson
Newsome, C.
Robinson & Sons

LIQUORICE

Bennett, Son & Shears (Lim.)
Burroughs, Wellcome & Co.
Gardner, W.
Martin Perls & Co.
Olinson, A.
Pinder, J. W.
Stratton & Craig (Sifting)
Werner & Pfeiderer (Knead-
ing and Sifting)

LITHIA

Fuerst Bros.

LOZENGES

Allen & Hanburys
Bylton, Astley & Co.
Davidson & Gray
Gibson, H., & Sons (Manfrs.)
Hill & Son
Jackson, T.
Lorimer & Co.
Pascall, J.

MACHINERY

Bennett, Son & Shears (Lim.)
Burroughs, Wellcome & Co.
Gardner, W.
Martin Perls & Co.
Olinson, A.
Pinder, J. W.
Stratton & Craig (Sifting)
Werner & Pfeiderer (Knead-
ing and Sifting)

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Duncan, Siller & Co.
Evans, Sons & Co.
Henry, T. & W. (Calined)
Hill, A. S., & Sons
Washington Chemical Co.

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Burroughs, Wellcome & Co.
(Kiepler)
Glendenning, W.
Hearon, Squire & Francis
Lorimer & Co.
Moss, J., & Co.
Raines & Co.
Richardson, John, & Co. (Lei-
cester), Lim.
Robinson & Co.

MARKING INKS

Bond, John (Crystal Palace)
(Ink and Pencils)

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Burroughs, Wellcome & Co.
Day, Son & Hewitt (Veterinary)
Day & Sons (Veterinary)

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Evans, Sons & Co.
Hockin, Wilson & Co.
Maw, S., Son & Thompson
Tyler, P. | Vint, T. J.

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Howards & Sons
May & Baker, Lim.
Tyler, T., & Co.

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Jones & Co.
Phillips, G., & Co.
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Smith, T. H., & Co.

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Fox, W., & Sons
Fincham, Johnson & Co.

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(Lanoline)
Chesebrough Co. (Vaseline)
Christy, T., & Co.

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Bertie-Smith & Co.
Hopf, R.

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Darton, F., & Co.

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Warrick Bros.
Witrofsky, J. R.

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Preserv.)

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Chesebrough Co.
Crown Perfumery Co.
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Ewen, J., & Sons
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Grescill & Son
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Lanoline | Mulhens, F.
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Sandoid & Co.
Sozio & Andrioli
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Truett, H. P., Lim.
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West, T. (Ocell's Monas)
Woolley, Sons & Co. (Powder)
Wright, Layman & Umney

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Basis Bros.

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Boehring, C. F., & Sons
Boulton, J., & Co., Lim.
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Bryce & Rumpf
Burgoyne, Burdidge & Co.
Burroughs, Wellcome & Co.
Chassagny & Co.
Duncan, Flockhart & Co.
Ferris & Co.
Fletcher, Fletcher & Co.
Giles, Schacht & Co.
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Hewlett & Son
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Lambert Pharmacol. Co.
May & Baker, Lim.

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Potter & Clarke
Richardson, John, & Co. (Lei-
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Smith, T. H., & Co.
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Sutton, W., & Co.
Symes & Co.

Tyler, T., & Co.
White, Alfred, & Sons
Woolley, Sons & Co.
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Werner & Pfeiderer

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Clay, Dod & Co.
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Davidson & Gray
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Evans, Sons & Co.
Harrowline Pill Co.
Hearon, Squire & Francis
Hill, A., & Son
Holloway's
Lloyd, T. Howard, & Co.
Lorimer & Co.
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Smith T. & H., & Co.**SALICYLIC ACID**Burgoyne, Burdidge & Co.
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London Homoeopathic and
Medical SchoolManchester Col. of Pharmacy
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Middlesex Hospital Medical
SchoolNorthern School of Pharmacy
Owens College
Royal College of Science
School of PharmacySheffield College of Pharmacy
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Pharmacy, Lim.St. Mary's Hospital School
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Westminster College
Will, W. W.**SEEDS**

Potter & Clarke

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TRUSSES

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VACCINATION

Vaccine Association (Lymph)

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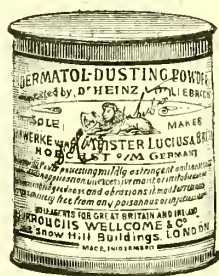
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INFLUENZA, AND OTHER CHEST AFFECTIONS.**In Bottles 1s. $1\frac{1}{2}$ d., 2s. 9d., 4s. 6d., 11s., and 22s.

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AS AN OFFICIAL JOURNAL

THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—PHARMACEUTICAL SOCIETY OF IRELAND, SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION, MIDLAND PHARMACEUTICAL ASSOCIATION OF NEW ZEALAND, CENTRAL ASSOCIATION OF NEW ZEALAND, OTAGO PHARMACEUTICAL ASSOCIATION, PHARMACEUTICAL SOCIETY OF QUEENSLAND, PHARMACEUTICAL SOCIETY OF SOUTH AUSTRALIA, PHARMACEUTICAL SOCIETY OF WESTERN AUSTRALIA, and TASMANIAN PHARMACEUTICAL SOCIETY.

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OUR DIARY FOR 1894.

THE CHEMISTS' AND DRUGGISTS' DIARY for 1894 is now in the hands of the binders, and will be delivered to all subscribers as promptly as possible. It is not too much to say that the Diary is the best we have published. It contains a unique feature which makes it invaluable to every body in business connected with pharmacy—viz., a Buyers' Guide, comprising more than ten thousand references. The literary features are all of a practical nature, and we have aimed to exclude everything which is not useful, and to include those things which are most useful.

Subscribers will please note that copies of this Diary will be sent to those only whose subscriptions are in force on December 1. Those whose subscriptions expire on November 25 have already obtained the Diary for 1893, and they cannot expect to get another before renewing their subscriptions. They will please do so promptly in order to ensure their getting a copy of the 1894 Diary in the usual course. Subscribers who wish extra copies, which are supplied at 2s. 6d. each, post free, or 3s. 6d. to non-subscribers will oblige by ordering now.

CROWN TURPENTINE MANUFACTURING COMPANY (LIMITED).—Registered with capital 500l. in 1l. shares to acquire the business now carried on by Peter Bowden, of Atherton, Lancashire, and to carry on business as manufacturers of turpentine, oils, chemicals, &c. The first manager of the company is James Percy Meadows, of 126 Huskisson Street, Liverpool, with a salary of 52l. per annum. The first directors are:—P. Bowden Westhoughton, turpentine manufacturer; A. H. Davis, 45 King Street, Rock Ferry, Cheshire; and A. T. Godden Smith, 39 Old Hall Street, Liverpool.

Summary.

WE report progress legally in the Pynka Syndicate v. Fordham case.

MR. EUSTACE CAREY, the well-known alkali-manufacturer, has advocated at Liverpool the eight-hours day for chemical-workers.

A BRADFORD chemist's message-boy has been killed by letting a cylinder of compressed lantern-gas fall. It exploded and blew his head off.

A JAMAICA correspondent sends us some particulars of the white patches which bloom on coloured folk's faces. A species of ringworm is the cause.

THE Somerset House chemists have again controverted a county analyst's decision in regard to malt vinegar. The sample mentioned this week was drawn at Morpeth.

A CHEMISTS' ASSOCIATION has been formed at Plymouth, which will embrace the Three Towns and district. Trade matters are to receive the chief attention of the Association.

IN an Editorial Note we give interesting statistics regarding the present condition of the chemical industry in Germany, and the profits yielded. The tendency seems at present to be downward.

OUR obituary page this week contains a sketch of the life of Mr. John May, the chemical-manufacturer. Sir Andrew Clark, President of the College of Physicians, is also numbered amongst the dead.

"Go to the ant, thou sluggard; consider her ways, and be wise." This is forcibly recalled by Muller's observations on the culture of fungi by ants mentioned in the Liverpool Students' Society's report.

"UNJUST TRADE" was the subject of a discussion at the Chemists' Assistants' Association. The members resolved to appeal to the Pharmaceutical Society to formulate a code of ethics for the trade.

WE give fuller particulars in our Legal Reports of the eight cases of alleged infringement of the Pharmacy Act which the Pharmaceutical Society are dealing with in Glasgow. One of the defendants is a very small boy who "stood in the shop."

MR. SCARLEBRICK, of the Inland Revenue Department, communicated to the London Section of the Society of Chemical Industry, on Monday, an important proposal to displace Sikes's method for the determination of the strength of spirit. This may probably become official.

THE evening meeting of the Pharmaceutical Society, on Wednesday, was a trifle dull. Mr. J. S. Ward read a paper on "The Collection of Manna in Sicily," and Professor H. G. Greenish spoke on spurious senna, matico, ipecacuanha, sarsaparilla, and other drugs. There was a fair discussion.

It will be remembered that a number of medical men received paid-up shares in a company for the consideration of recommending the company's specialities. The liquidator of the company wished them to pay up the shares, but a High Court justice decided against him. An appeal against this decision has been dismissed.

WE report the proceedings of the meeting of the Midland Pharmaceutical Association, at which Dr. Symes read his paper. Mr. F. H. Alcock was presented with a polarimeter, on his retiring from the honorary secretaryship of the Association; and Mr. Thompson, the President, reported progress in the Federation of Associations.

THE Pharmaceutical Society of Ireland have settled the curriculum question, so far as they are concerned, by passing a resolution under which candidates for the Licence examination will be required to produce a certificate that they have attended a course of lectures on botany and materia medica at a recognised school. Details have yet to be settled.

MR. IVAN LEVINSTEIN, as Chairman of the Manchester Section of the Society of Chemical Industry, reports an improvement in our chemical-exports, mainly owing to raw products being converted into finer chemicals before exportation. He also gave an interesting description of the manufacture of artificial indigo, prophesying that the days of natural indigo are numbered.

English News.

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Chemists Elected on Town Councils.

Mr. W. Griffin, at Louth.
 Mr. J. Tomlinson, at Bolton.
 Mr. F. Dickinson, at Stamford.
 Mr. J. A. Steward, at Worcester.
 Mr. Henry Litherland, at Wigan.
 Mr. W. Cossens, at Monmouth.
 Mr. A. B. Turpin, at Chippenham.
 Mr. Valentine Norman, at Godalming.
 Mr. Thos. Clarkson, at West Hartlepool.
 Mr. J. J. Phillips, at Ashton-under-Lyne.
 Messrs. P. B. Hemwood and R. Young, at Liskeard.
 Mr. C. Durant, patent-medicine proprietor, at Boston.
 Mr. Crosbie, chemical manufacturer, at Wolverhampton.
 Mr. W. R. Kermath was returned at the top of the poll at St. Andrews, Fifeshire.
 At Portsmouth, Mr. W. R. Fowler successfully defended his seat by 453 votes to 337 given to his opponent. Mr. T. Brewis was an unsuccessful candidate.

Spirit of Salt for Lime-juice.

A young woman named Emma Gunn, of 37 New Dorset Street, Brighton, died on November 2 at the hospital through drinking hydrochloric acid from a bottle, supposing it to contain lime-juice.

Recreation after Work.

The employes of Messrs. Burroughs, Wellcome & Co. (of Snow Hill Buildings, London), at the Phoenix Works, Dartford, have inaugurated a series of monthly dances in connection with the Phoenix Literary and Musical Society, at the Dartford Conservative Hall.

Hackney Guardians Want a Dentist.

The Hackney Union Board of Guardians have decided to advertise for a dentist to attend to the teeth of the children at the Board's schools. A proposal to appoint Mr. T. A. Outred, dispenser at Homerton schools, without advertising, at a salary of 100*l.* a year, for one day's service per week, was lost.

Arsenic for Epsom Salts.

Last week Mr. Thomas Cave, of Oxford, took from a small dark cupboard what he thought to be Epsom salts, which he mixed with water and drank. He was quickly seized with symptoms of arsenical poisoning, and though prompt medical aid was obtained, death ensued during the night. The arsenic appears to have been bought as vermin-killer. At the inquest, a son mentioned that his father had spoken about vermin-killer being in the house. Dr. Wilson stated that arsenic was frequently used as rat-poison, but the law required that it should be coloured with some substance, red or blue, before being sold retail. The jury returned a verdict that deceased met his death accidentally by taking arsenic instead of Epsom salts.

Veritable Vivisection.

The *Trapholist* quotes a curious story from the *Hieramosca* of Florence. It states that two doctors of Guayaquil, in the South American Republic of Ecuador, have offered in the New York papers to give \$5,000 (25,000 lire) to anyone who would "submit to a surgical operation which might possibly cause death." The operation in question is to make an opening in the stomach, insert a glass, and watch the processes within. Will it be believed, asks the *Hieramosca*, that 142 persons presented themselves to Professor Edurin J. Osbalderston, of New York (the referee of the Guayaquil doctors), as candidates for the prize? The selected one is an athlete and wrestler, and has started for Ecuador.

A Druggists' Dinner.

The fifteenth annual dinner of the employes of Messrs. James Woolley, Sons & Co., Manchester, was held last Friday evening, November 3, at the Crown Hotel. Songs, music and speeches followed the dinner. Among the vocalists were Messrs. E. Johnstone, A. C. Vallance, J. D. Smith, and J. Franklin. Mr. A. H. R. Balmforth presided at the piano. The toast of "The Firm," proposed by Mr. A. Balmforth and supported by Mr. J. Tyson, was responded to by Mr. E. J. Woolley, the junior member of the firm.

Fire.

On the evening of November 3, a fire occurred on premises used by Mr. Clement Darlington as a drug-warehouse at Hill Street, Highfield, Sheffield. It is reported to have been caused through a lad dropping a candle near a cask of turpentine. The fire was soon got under by the brigade, bags of whiting and ashes being thrown over the burning turpentine. The damage is estimated at 100*l.*

The White Horse Threw him.

There was a big Guy Fawkes carnival at Tavistock on Monday, and in the course of it Mr. J. P. Inch, of Harrowbarrow, an assistant with Doble & Sons, chemists, had an unhappy experience. He was mounted on a large white horse which bolted, and ultimately dashed down the railings of a house, throwing Mr. Inch over its head. Fortunately a bush broke his fall. He was taken into the house, where he fainted, and was attended by Dr. Smale, who had him conveyed to his lodgings. The doctor found that he had sustained a severe shock to the system.

A Victim to the Coal-strike.

Mr. Staples, who carried on business in Sheffield as a coal-dealer, died about five months ago. His widow endeavoured to carry on the business, but the coal-strike occurred, and ruined her business. A week ago she received notice to quit the premises she occupied. This preyed upon her mind, and, going to a neighbouring chemist's, she bought 8 oz. of ammonia. A portion of this she swallowed on Monday, and killed herself. At the inquest, on Tuesday, a verdict of temporarily insane was returned.

Boots (Limited).

This company, which now carry on 29 drug-businesses (namely, 6 in Nottingham, 8 in Sheffield, 3 in Derby, 2 in Rotherham, 2 in Lincoln, and 1 in each of the following towns—Burton-on-Trent, Ilkeston, Grantham, Loughborough, Gainsborough, Grimsby, Chesterfield, and Hanley), held their ordinary general meeting on Saturday last, November 4, at the George Hotel, Nottingham. Alderman James Duckworth, J.P., of Rochdale, chairman of the board of directors, presided, and there was a good attendance of shareholders. The report and balance-sheet had been privately circulated among the shareholders, and has not been made public, but it appeared from the Chairman's address that the profit from the past eighteen months' trading amounted to 12,576*l.* There appears to have been 6 per cent. paid on the preference shares, and 10 per cent. on the ordinary shares, and 10 per cent. on the "deferred vendors' shares." They were writing off half of the preliminary expenses, and had 1,509*l.* debited for depreciation and repairs, 1,000*l.* was carried to the reserve fund, and 1,113*l.* 0*s.* 10*d.* was carried forward, being equal to more than half the amount of next year's dividend on the present capital, exclusive of the dividend on the deferred shares. The Chairman said the past year had not been an ordinary one. First, they had opened nine new shops at a cost of about 15,000*l.* for fitting and stocking, from some of which they had not had a full year's profit. Then the great depression in trade, arising from the miners' lock-out, had been keenly felt in the towns where some of the company's shops were situated. The Chairman, who said he had forty-five retail shops of his own in another trade and "knew what he was doing," said he was so well satisfied with the prospects of this company that he had added to his 2,100 shares 1,200 more, making in all 3,300, and he had recommended them to his personal friends. They did not intend, he said, to see how large a dividend they could make, but their object rather was to

provide a safe investment for their customers and friends, and serve the public on an improved system, giving them better value for their money than they had been able to obtain anywhere previously.

Alderman Sands (Nottingham) seconded the adoption of the report without comment, and the motion was agreed to.

The Chairman was re-elected a director, and Mr. John Gibbs (London) was added to the directorate. Messrs. Sharp, Parsons & Co. were re-elected auditors, and a vote of thanks was passed to the managing director and staff.

Taking Rat-poison.

A farm-labourer named Robert Singleton, of Blowing Sands, near Blackpool, purchased some rat-poison, containing 24 grs. of arsenic and the same amount of strychnine, from Mr. Laurie, chemist, of South Shore. His wife found him in the stable, standing with his mouth covered with the powder. He refused to take an emetic, and died. His household effects were about to be sold for rent when he took the poison.

Unfounded Charge against a Dispenser.

William Miller Kirton, dispenser, and a nurse named Robinson were charged at the Manchester Assizes, on Tuesday, with committing an illegal operation on a woman named Cordrey, at Heaton Norris, near Manchester. At the close of the evidence, the jury, "after a moment's consultation," acquitted both prisoners.

Theft by an Errand-boy.

George Hunt, aged 11, errand-boy, was charged before the Exeter Magistrates with stealing 10s. from the till in the shop of his employer, Mr. S. C. Milton, chemist, 265 High Street, Exeter. Money has been missed from the drawer for some time, and the assistant secreted himself on the premises and saw the lad open the till and take out the money. The Bench ordered that the boy should receive three strokes with the birch rod.

Carbolic-acid Fatalities.

The infant daughter of a cabinet-maker, living at 52 Brunswick Place, E.C., died on Thursday last from the effects of burns from carbolic acid. The child got at a bottle which was kept in the house for cleansing and sanitary purposes.

Some children on their way to school at Preston village, North Shields, on November 3, found a young man lying on the ground with a bottle of carbolic acid, part of which appeared to have been drunk by him, lying beside him. He was conveyed to the workhouse, where he died. It was then discovered that his name was Hogarth, and that he carried on business as a butcher in North Shields.

An inquest was held on Saturday last on the body of Mr. J. W. Burgess, nurseryman, of Charlton Kings, Cheltenham, who died the previous Thursday from the effects of carbolic acid. The jury found a verdict of suicide by carbolic acid, self-administered while in an unsound state of mind.

Kate Doyle, 26, a servant, of Altrincham, committed suicide with carbolic acid on October 29.

The same day a child named West, 2½ years of age, daughter of a Liverpool carter, finding a bottle of carbolic acid under a chest of drawers, drank some of it, and died soon after at the hospital.

The Proposed "Dangerous Employments" Legislation.

The following is the text of the letter which has been forwarded by the Chemical Section of the London Chamber of Commerce to Mr. H. S. Richmond, the secretary of the Home Office Committee of Inquiry into Dangerous Employments, and which was alluded to in our last week's report of the meeting of the Chemical Section:—

SIR,—Adverting to the interview which your Committee were good enough to accord to representatives of the manufacturing interest upon our Chemical Trade Section, at the Home Office on October 23 at noon, I am now directed by the Chemical Trade Section, to whom these gentlemen have now reported the substance of their inter-

view, to thank you and your Committee for your courtesy in affording us an opportunity to lay before you the views of London manufacturers, as to the regulations which would be practicable in those industries with which they are connected. I have now to state, formally, that the Chemical Trade Section of this Chamber, after discussion, attach the greatest possible importance to the embodiment in the regulations of clauses carrying out the spirit of their delegates' suggestions, which, briefly stated, are these:—

1st. The adoption of the best practicable means (following the precedent laid down in the Alkali Act of 1892) for securing safety to the persons and the health of workers, leaving it to manufacturers and inspectors to decide as to what may be the best practicable means.

2nd. The permitting of wide discretion to the inspectors, with power of appeal by manufacturers to the Home Office authorities.

3rd. The power to enforce, by fine or otherwise, the observance of the regulations by workmen.

As we are informed by the gentlemen appointed to wait upon your Committee that there would be a disposition on the part of your Committee to modify its proposed regulations, in view of the representations made at the interview on October 23, might I respectfully suggest that before finally submitting the result of your Committee's labour to the Home Secretary, it might be well to afford the gentlemen who have already waited upon you another opportunity of perusing the proposed regulations. I may state that this course was followed from time to time by the Board of Agriculture in connection with the Fertilisers and Feeding Stuffs Bill, with the most satisfactory results to both the trade and the department concerned, and the Bill was finally passed into law with the entire approval and sympathy of the trade. In fact, owing to their representations, clauses were eliminated from the original Bill which would have been impracticable and harassing to trade interests.

Again tendering you and your Committee the thanks of our Chemical Trade Section for the extreme courtesy shown to us in connection with this inquiry,

I am, Sir, yours respectfully,

KENRIC B. MURRAY (Secretary).

Mr. Richmond in reply states that he has already presented the report of the Chemical Committee to the Secretary of State, but that a copy of the proposed special rules will be sent to each works before the rules become binding.

St. Luke's Vestry on the Somerset House Chemists.

At the meeting of the St. Luke's Vestry on Tuesday, Mr. Rumball moved that a petition prepared by the Health Committee, asking for amendments in the Food and Drugs Act, should be adopted by the Vestry. Mr. George Eade, chemist, seconded. The petition contained the following clause:—"That the following clause be eliminated from the petition:—'The present Court of Reference (Somerset House) is, in the opinion of your petitioners, unsatisfactory, its methods of analysis and its standards for natural articles being unknown, and it has lost the confidence of the general body of analysts.'" Mr. Churchwarden Tusten moved the elimination of this clause and asked what were the grounds on which the Committee had arrived at their conclusion. The Chairman (Mr. Churchwarden Easterling) said it was a matter of common notoriety that the officials of Somerset House had lost the confidence of the public. Mr. George Eade said that from what he saw in the journals devoted to the trade to which he belonged—the chemist and druggist's trade—he believed that the decisions of the Somerset House analysts were frequently overturned. The assertion in the petition was undoubtedly a very sweeping one, but it was not stronger than was deserved. He must ask the Vestry to support the petition drafted by the Public Health Committee. The proposition was carried.

A Chemist's Message-boy Killed.

At Bradford, on Wednesday evening, John William Tullar, employed by Messrs. Riley, chemists, of Cheapside, was conveying two iron cylinders of compressed gas, to be used for magic-lantern purposes, up the Great Northern Railway station subway, when he let one fall. There was a terrific explosion, and the greater part of the lad's chest, head, and

arms, was blown away. The deceased, who was 13 years of age, had only been a few days in Messrs. Riley's employment.

A Prescribing Herbalist.

An inquest was held on November 2, on Albert Henry Rose, 11, son of a cheesemonger's assistant, living at 14 Newark Street, Commercial Road, E. The father said his son was unwell, and his wife went to Mr. White, Commercial Road, who described his complaint as violent cold and low fever. The Coroner: Who and what is Mr. White? The Coroner's Officer: He is a chemist or herbalist, not a qualified doctor. We have had several cases of patients going to him. Dr. Sullivan said it was a case of typhoid fever. The jury returned a verdict to this effect, and requested the Coroner to call the attention of the Medical Council to the case.

Irish News.

"Sequah" Cutting.

One of "Sequah's" vans, with brass band, &c., has been at Tullamore during the last week, piloted by Mr. Hartley Snow, who has been selling the "Prairie Flower" and "Indian Oil" medicines at 1s. per bottle. This is regarded as an injustice to the local chemists, who have to pay 23s. per dozen net cash for their supplies, and retail them at 2s. per bottle. A local draper has been appointed special agent in Tullamore, from which it appears that "Sequah" intends cutting out the chemists.

Medicine-contract.

Messrs. Thacker & Hoffe (Limited), Dublin, have again been appointed contractors for supplies of drugs and medical requisites for one year to the Board of the Meath Hospital and County Dublin Infirmary.

The Templemore Case.

In the Pharmacy Act prosecution at Templemore, which we briefly reported last week, in which Francis O'Mullane was charged at the suit of Sergeant Patrick McGann, R.I.C., with having sold poison, and kept open shop for selling poison, the defendant's solicitor, Mr. Carrigan, took several legal objections. First, he claimed that the summons was bad, inasmuch as the Pharmaceutical Society being the real complainants, it was necessary that they should sue and be sued as a corporate body. On the ground that Sergeant McGann was described as an inspector under the Pharmacy Act, the Magistrate overruled this objection, but made a note of it.

The case was an adjourned one. When it first came on in July last, the Court had ordered that the oxalic acid bought should be analysed. The certificate of Professor Tichborne was now produced. Mr. Carrigan objected to this. The Pharmacy Act he said, did not provide for the admission of an analyst's certificate. Under the Food and Drugs Act this was expressly provided for, but under the Pharmacy Act the personal attendance of the analyst was necessary. To this Sergeant McGann replied, that in the last two cases he had the defendants were convicted on the certificates of analysis—and one of the cases went to the Queen's Bench, and there was no question raised on that point. Mr. Bruen did not rule whether he would receive the certificate in evidence, but said he was satisfied that the article was a poison.

The Sergeant having closed his case, Mr. Carrigan argued that he had not produced the necessary evidence. The Act, sec. 19, provided that before any of the following provisions should take effect, copies of certain proceedings should be published in the *Dublin Gazette*. Sec. 30 was the one under which this case was brought. In a case heard in Dublin a few weeks ago the *Gazette* had been produced. He (Mr. Carrigan) asked, therefore, to have the case dismissed. Sergeant McGann asked for an adjournment. Mr. Carrigan objected. The case had now been adjourned several times for Sergeant McGann, and his client had been put to a lot of inconvenience. Why did not the Society get a solicitor to represent them, instead of asking for adjournments every time they were worsted? If they wanted a 5l. penalty, they might do something to earn it.

Mr. Bruen agreed with Mr. Carrigan. The prosecution should come into court prepared with their proofs. The case would be dismissed without prejudice.

In a second case against Mr. O'Mullane, for having, at same time and place as in last case, sold a poison to Sergeant McGann without having it labelled with the name of the article and with the word "poison," and with the name and address of the defendant (seller), Mr. Carrigan pleaded guilty for his client, but submitted, in extenuation, that the sergeant went to purchase poison, and knew he was getting poison. He asked his Worship to inflict only a nominal penalty.

Mr. Bruen said a nominal penalty would not by any means meet the case. Taking all the circumstances into consideration, he would impose a fine of 1l. and 1s. costs.

Scotch News.

Edinburgh Chemists' Ball.

There was a meeting of local pharmacists at 35 York Place, Edinburgh, last Friday evening, for the purpose of making preliminary arrangements for the annual chemists' ball. An influential and large committee was appointed, with Mr. John T. Coats as convener, and it was agreed to hold the ball in the Masonic Hall, on Thursday, February 8, 1894. It is expected that the ball will "beat the record," and that the committee mean business is evident from the fact that tickets (15s., inclusive) are now ready.

The Glasgow Parochial Board's Pharmaceutical Business.

At the monthly meeting of the Glasgow City Parochial Board, on Tuesday, November 7, it was reported that an application had been received by the medical committee from Messrs. John Richardson & Co. (Limited), 10 Friar Lane, Leicester, to be supplied with a form of tender for the supply of drugs, &c., to the town's hospital and asylum. The committee agreed that a form should be sent the firm when the next drugs are required.

The Board agreed to increase the salary of David Hannay, the apothecary's junior assistant, from 12l. to 17l. per annum.

It was decided to purchase from the Glasgow Apothecaries' Company 100 lbs. best cotton lint, at 1s. 2½d. per lb.; while Messrs. Leggot & Gibson got an order for 120 lbs. of ganglee tissue, at 1s. 1d. per lb.

During the past month the Glasgow Apothecaries' Company made up 83 prescriptions, Messrs. J. & R. Rodman 87, and Mr. D. P. Walker 63, for the outdoor poor under the management of the City Board.

Gazette.

PARTNERSHIPS DISSOLVED.

Finden, H., and Welch, E., White Street, Fin-bury, E.C., under the style of J. Smith & Co., brush-merchants.

Horsley, J., and Wharan, W. J., seel-crashers and chemical and manure merchants, under the style of Horsley & Wharan, Hull.

Jackson, J., and Leicester, T., surgeons and general medical practitioners, Huntingdon Street, Barnsbury, N., under the style of Jackson & Leicester.

The business carried on by the late R. Miller, merchant, Glasgow, under the style of George Miller & Co., manufacturing chemists and oil-merchants, Glasgow, has been transferred by his trustees to J. C. Miller and G. Miller, both sons of the late R. Miller, and they will continue the business under the same style.

Riches, T., and Tomlin, J. P., chemists and druggists, Torquay and Paignton, under the style of Riches & Tomlin.

Thomson, A., and Gibson, W. S., general medical practitioners, Skipton, under the style of Thomson & Gibson.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Henden, William, Sidestrand, Norfolk, manufacturing chemist.

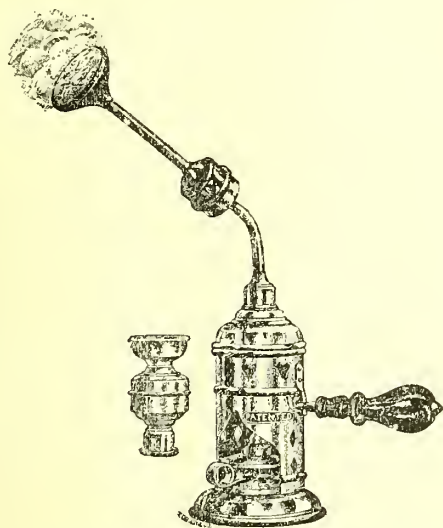
ADJUDICATION.

Morgan, Albert Hall, Hereford, chemist.

Notes of Nobelties.

DR. COULTER'S VAPORISER AND INHALER.

With the approach of wintry weather bronchial attacks will, as of old, become the order of the day. The Coulter Vaporiser Manufacturing Company have been educating the public for about a year in regard to the use of Dr. C. L. Coulter's combined vaporiser and inhaler; to bring it, in



short, into households as an apparatus to resort to in acute or chronic bronchial affections. The apparatus is illustrated in the annexed engraving. It is beautifully made, and finished in nickel silver. We have seldom seen a more compact apparatus, or one so well-designed for the purposes in view. The company's office in London is at 22 Charing Cross Road.

FROM SNOW HILL BUILDINGS.

We have before us a small stock of novelties from Messrs. Burroughs, Wellcome & Co., which illustrate their steadily-spreading energy in medical matters. Perhaps the most seasonable article is a throat and bronchial tabloid (compressed cubeb compound), consisting of 2 grains of powdered cubeb and $\frac{1}{2}$ grain of ammonium chloride combined with liquorice. These tabloids should be a good winter remedy, for the composition is a useful one, and the form convenient. The aluminium aseptic syringe which we illustrate is not

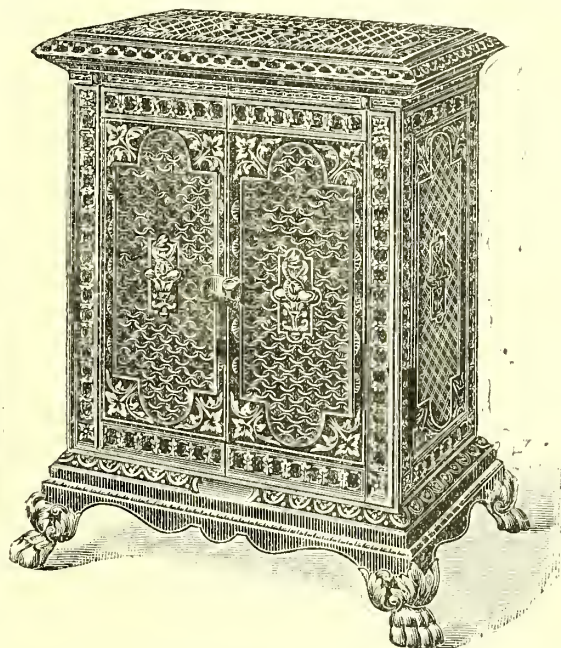


exactly new, for it is one of a class which carried off a medal at the Chicago Exhibition. We have not had the opportunity of referring to it until now. The syringe consists of a glass barrel enclosed in a perforated aluminium cylinder or sheath. The piston and other parts are made of the same metal, and the packing is peculiar, being composed of inorganic matter, which is renewable, and is of such a nature that washing with water or alcohol makes it quite aseptic. The glass barrel is graduated in minims and cubic millimetres, and the syringe is provided with straight and dental needles. Messrs. Burroughs, Wellcome & Co. are now making "soloids" of iodic-hydrarg. Each contains 1 grain of

potassio-mercuric iodide, an antiseptic which is even more powerful than mercuric chloride. The same compound is used largely as an intestinal antiseptic, for, as Dr. Luff showed some years ago, the salt combines with the ptomaines which are so provocative of infantile diarrhoea and renders them insoluble and inert to the system. The tabloids of iodic-hydrarg. contain a sixth of a grain, sufficient for a safe adult dose in syphilis, and to make, say, 2 oz. of a mixture for a child. We note that the firm are now making $2\frac{1}{2}$ -grain antipyrin tabloids, pleasantly coated with sugar.

THE "CABINET" GAS-STOVE.

We mentioned recently that Messrs. S. Clark & Co., "Syphon" Works, Park Street, Islington, N., had introduced a new form of their "Syphon" gas-stoves, specially adapted for heating halls, pharmacies, and other public apartments



where an elegant apparatus is desirable. We now give an illustration of the stove, and it will be seen from this how well suited it is for the purposes mentioned. The stove is finished in black enamel, relieved by nickel mounts.

KINGZETT'S SULPHUR CANDLES.

SINCE we noticed the sulphur candles made by the Sanitas Company (Limited), Mr. Kingzett has improved upon his original design. That, it will be remembered, consisted of a dish of sulphur with a fuse consisting of sulphur in admixture with chlorate or nitrate of potassium or sodium. Mr. Kingzett now finds that the fuse may be altogether dispensed with, and he now employs in its place a strip or ribbon of Brussels net, which is first of all coated with a thin layer of sulphur. The strips of material thus coated with pure sulphur are afterwards cut up into suitable lengths, bent into circular form, and then insetted in the molten mass of sulphur forming the body of the candle. On application of a light to the prepared strip, which stands up above the surface of the body of the candle, it immediately takes fire and burns with great rapidity, the molten sulphur running down on to the surface of the candle, and firing it immediately. Mr. Kingzett has applied for a patent for this improvement.

The Winter Session.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN. EVENING MEETING.

A somewhat scanty audience greeted Mr. Carteighe when he came in on Wednesday, to take the chair at the first evening meeting of the session. The PRESIDENT, in introducing Mr. John Stringer Ward (of Hodgkinsons, Treacher, & Clarke), who was to read a paper on

THE COLLECTION OF MANNA IN SICILY,

said that the more questions the members asked Mr. Ward the better he would like it.

Mr. WARD then read his paper. He was asked to investigate the subject by Professor Greenish; so when he went to Sicily, in March, he made inquiries at a village six miles from Palermo. The manna-ash there is the *Fraxinus rotundifolia*, and it grows much like the pollard willow with us. The parent stem is cut down to the ground, and from that stems grow up all of which begin to yield manna when they are about ten years old. Incisions are made in the tree from right to left, and day by day, during the months July to September. In the course of this time about forty-five incisions are made, beginning at the bottom, that accounting for the flakes which we are so familiar with. Three rows of incisions are made in as many years, then the stem is cut down. In rainy seasons, when the exudation is thin, a cactus-leaf is placed at the bottom to catch the manna. The average number of stems to a tree is three, and the diameter is about 3 inches.

A specimen was handed round, and two "snap-shots" were thrown on the screen to show how the trees grow in the hedges of cactus.

Professor GREENISH, in complimenting the author upon the interesting nature of his paper, said that Mr. Ward came to him some months ago, stating that he was going to Sicily, and asked him whether he could do anything for him there. Professor Greenish then suggested that further information on the subject of the collection of manna would be very acceptable. Mr. Ward might probably be disappointed at finding that the collection of the drug at the present day was practically the same as that described in "Pharmacographia"; still, they were thankful for the fresh light which Mr. Ward had thrown upon the matter.

Mr. MURTON HOLMES asked for information concerning the quantity of manna produced, and that imported into this country. The consumption of manna in England had fallen off very considerably during the last fifteen years or so, and the principal use was now found in poor neighbourhoods, where the habit of taking manna still lingered as an old custom. Physicians seldom prescribed it now, however. About fifteen years ago there was a temporary scarcity of manna, and the decline in the consumption dated from that period.

Mr. WARD said that it was very difficult to say, even approximately, what was the quantity imported. The best quality of manna was generally used in this country, Italy and other parts being the consumers of the commoner grades.

Mr. CHARLES UMNEY observed that about twenty-five years ago the importation of manna into this country was about 100 tons a year. That, at any rate, was the figure given by Daniel Hanbury, with whom, as they all knew, manna was a pet subject. Hanbury, however, appeared to have devoted more study to the manna of Calabria than to that of Sicily, and some twenty-five years ago read a paper on the subject of Calabrian manna at a Conference-meeting in Brighton.

Mr. GREENISH, Sen, would like to have some information on the subject of the origin of manna in the cell-tissue of the manna-ash. What part of the cell was it from which the exudation originated? He was particularly interested in this matter, because some years ago he read a paper on Goa powder, which was an exudation produced by the breaking-up of the entire tissue. It appeared to him that manna is the starchy portion which is broken up.

Mr. WARD, replying, said that the exudation only takes

place during the summer. Only sorted manna comes into this country.

Mr. MARTINDALE thought that the secretion was like that which occurs in the maple.

Professor ATTFIELD thought so too, and recalled a communication made by him in regard to a silver birch in his garden which was injured and excreted an icicle of sugary stuff, while pints of the liquid fell to the ground.

The PRESIDENT said Mr. Greenish's point was a physiological one—not what the secretion was composed of, but where it came from; whether it was a whole lot of cells breaking away, or some specific part. He thanked Mr. Ward for his communication, and called upon Professor Henry George Greenish for the next, on

CERTAIN SPURIOUS DRUGS RECENTLY IMPORTED.

The first of these was a specimen of senna which came from Tunis. It was supposed to be the leaf of *Pistacia lentiscus*, but histological comparison showed that to be erroneous, and further search, in which Mr. Baker, jun., assisted, revealed the fact that the leaves are probably a species of *Xanthoxylum*, but which he could not say.

Some large ovate-shaped leaves, which Professor Greenish had picked out of a broker's sample of matico was the next subject of comment. This looked not unlike true matico, but there was something suspicious about it. Examining it under the microscope, and alongside true matico, he found it to be spurious. True matico has an epidermis of tubular cells, with a similar hypodermis, but the spurious stuff has no hypodermis, and the epidermis is made up of large square cells, while the cells of the fleshy part are much larger, and so are the oil ducts. Moreover, true matico contains only one or two calcium oxalate crystals in each cell, but the spurious leaf contains from 5 to 10. There is no doubt that the leaf is a species of Piper, but which he could not say. Turning to jalap, the Professor showed a sample consisting of five tubers, representing three distinct plants. The roots were long and tapering, and although their source was not identified, the histological structure showed them not to be *Ipomoea arizobansis*. Some months ago a curious drug was imported from New York as sarsaparilla. It was very unlike that, being leathery-looking, tough, and thicker. There were 4 bales of it, and Professor Greenish finds that it is a fern rhizome, probably from an *Acerosticum*. The author also offered some remarks upon ipecacuanhas, of which some parcels have recently been offered which closely resemble the *Richardsonia* root.

Mr. E. M. HOLMES commented on the paper, which, we may say, was nicely illustrated with diagrams and microscopic sections. He said that a curious point about the senna was that it has resulted in a research by one of the Kew authorities, who has determined it to be a new species of *Xanthoxylum*, with the leaf of that genus and the flower of *Pilocarpus*. It resembled jaborandi. There were many drugs like sarsaparilla sent to him; caliguala they were called. These are fern rhizomes, which are used for syphilis.

Mr. MARTINDALE was struck with the resemblance of the spurious senna both in taste and shape to jaborandi. What was the action of it?

Mr. CHARLES UMNEY, speaking as a wholesale druggist, said that he had seen the sarsaparilla, matico, and jalap before, but nobody offered for them. No one who had been trained in Bloomsbury Square would take the senna for the true thing. (Applause.) About jalap: this was deteriorating. Twenty years ago they got it with 15, 17, or 18 per cent. of hard resin. Nowadays they had difficulty in getting it with the B.P. 10 per cent., and he sometimes thought of writing to Professor Attfield to say that the B.P. standard was impossible. The most important subject was ipecacuanha. The false roots were not so perplexing as the true drug. They had the Granada or Cartagena and the Brazil or Rio roots. Both were valuable, no doubt, but it was said that they contained another alkaloid than emetine—the Cartagena especially. He would like if Dr. Paul could tell them more about that, the more they knew of ipecacuanha the further back they seemed to go with it.

Professor ATTFIELD said the representations of pharmacists, both retail and wholesale, in regard to the Pharmacopoeia standards, would always receive respectful attention.

Dr. PAUL said he had nothing to add at present in regard to ipecacuanha alkaloids. He would by-and-by.

Professor GREENISH then replied, and defended the histological examination of drugs. This brought up Professor ATTFIELD with the suggestion that wholesale druggists should send specimens of spurious drugs to Square students, so as to encourage the beginnings of research.

The PRESIDENT, in closing the meeting, rather discouraged that. Research, to be of any value, must be conducted by competent men under competent authority. The President did not speak as briefly as that, but quite as forcibly, and to a larger audience than there was an hour before.

SOCIETY OF CHEMICAL INDUSTRY.

LONDON SECTION.

THE first meeting of the present session was held on Monday evening, at Burlington House, W. There was a good attendance, and after the usual preliminary business, Mr. J. SCARISBRICK, of H.M. Inland Revenue, was called upon to read a paper on

SPIRIT-ASSAYING BY WEIGHT.

The first part of the paper was historical, and dealt with the rise and progress of alcoholmetry in the United Kingdom. For instance, Mr. Scarisbrick quoted, from a quaint English writer in 1527, the directions for testing aqua vitæ by burning a rag wet with the liquid: if the rag were burnt, the spirit was good; if it were not burnt, the spirit was bad. The same notion was applied to gunpowder when it was introduced, and it was thus that the proof-test came into vogue. If the powder did not go off, the spirit was "below proof," but if it flared up rapidly, and went off with a "poof," the spirit was "strong, or high proof." Another curious test was mentioned—viz., the ignition of a measured volume of the spirit, and noting the volume of water which remained. There was also the "bead-test," and other methods, but it never appeared to strike our forefathers to compare the weight of the spirit with that of water, or of proof spirit. It was not until the seventeenth century that the hydrometer began to be used, and this in consequence of the tax upon spirit, and the necessity for testing it more accurately than had previously been done. In this connection the author traced the history of the hydrometer, disputing the common assertion that it was invented by Hypatia. He assigns the invention to Archimedes. The instrument was forgotten until Robert Boyle re-invented it about 1667, and used it for testing spirit. Various improvements have been made upon it since, and now there are at least sixty types of it. Sikes's hydrometer was first brought under public notice in 1803, and has been used ever since. It was contrived solely for fiscal purposes, said Mr. Scarisbrick, and not at all for trade purposes. It was Sikes's aim to determine a given spirit at all temperatures. The want of appreciation of this object has led to much unjust criticism of the Sikes method; and, while the author did not pretend that it was quite up to the science of to-day, he maintained that it had been of immense service to the Revenue of the United Kingdom. He proceeded to explain how the Sikes system was founded and introduced by the Revenue authorities. A hundred years ago the Royal Society, at the request of the Government, investigated the whole subject of assaying alcoholic liquors for Revenue purposes. This was continued for four years, and in 1794 a report, with fifty-one sets of tables, was submitted to the Government. The tables were compiled by Gilpin, from data obtained during the investigation. The accuracy of these tables has been verified again and again since that date, and the author maintained that, as a sound and unimpeachable basis of alcoholmetry, they cannot be surpassed. Upon these tables students of alcoholmetry of the day were invited to submit proposals for the more accurate testing of spirits for Revenue purposes. The committee appointed to consider the proposals submitted selected Sikes's, although it did not agree with the conditions in a single particular. He simply regarded the Revenue necessity for a system which would identify a spirit at all temperatures, but at the same time ignoring expansion and contraction altogether. The standard or "proof" spirit was first legalised, in 1816, as one "which at the temperature of 51° F. weighs twelve-thirteenth parts of an equal measure of water." As the temperature of the water was not stated, and thereby a difficulty was introduced, the definition was

dropped two years later. The author proceeded to show that Sikes's tables give really fifty-one different standards. A few of the figures which he submitted will suffice to show this, the strength in all cases being "proof":—

Temperature	Hydrometer	Specific Gravity of Proof
30°	65.2°	.93240
42°	62.7°	.92743
55°	59.5°	.92196
68°	56.9°	.91634
80°	54.0°	.91094

It is obvious that when Sikes's tables are used for trade purposes they lead to unsatisfactory results. They are accurate at 51° F., but more or less erroneous at other temperatures. To show the effect of this the author supposed the case of a merchant buying 30 casks of brandy, each containing 100 gallons, and paying for it at the rate of 15s. per gallon at proof by Sikes. If he bought it at 80° F. he would pay 85l. 10s., or 4 per cent. more for it than he would at 35° F. The effect of the system is seen when we look at the whole of the spirit in bond at any one time. A rise or fall of 1° F. makes a difference of 50,000 gallons in the quantity, or if the whole of the spirit were taken out of bond at one time there would be an increased revenue of 1,100,000l. if it were taken out at 80° F. instead of 35° F. Similar discrepancies vitiate more or less every account taken by Sikes's when his numbers for revenue identification are used as factors for proportional value. Mr. Scarisbrick did not pretend to defend the system, although he said it had suited the revenue purposes admirably. Yet allowing everything favourable to it, it has to be admitted that the system entails much loss to the Revenue, and Mr. Scarisbrick has given attention to the matter with the view to improving upon the Sikes system, keeping in view that any process for revenue purposes must be applicable to all spirituous liquids, usable without previous training and make little or no alteration in existing standards. Mr. Scarisbrick's method is based upon weight and not volume—i.e. the weight of a gallon of proof spirit at 60° F. (viz. 147.1 oz.) is taken as the standard, the specific gravity of such spirit in comparison with water at the same temperature being 0.91984. The instrument



FIG. 1.



FIG. 2.

used may be the hydrometer, or the spirit-balance (Ramsden's balance hydrometric) which is preferred; but revenue officers and merchants are so accustomed to hydrometers that the disuse of these is not discouraged. In fact, Mr. Scarisbrick has designed two instruments which will meet the requirements of his proposed method. One of these is Scarisbrick's areometer (fig. 1), an instrument made of glass

and provided with thirteen metal poises, which slip on the stem. This instrument indicates specific gravities from 0.790 to 1.000, and can furnish 42,840 indicated strengths as compared with Sikes's 25,500. "Scarlsbrick's universal densimeter" (fig. 2) is a similar instrument made of metal.

These instruments give the actual specific gravity of the spirit tested, and the tables show the equivalents in ounces per gallon of standard spirit, and percentage of proof spirit. This will be understood by the following examples:—

Hydrometer Indication	Standard Spirit per Gal. in Oz.	Percentage of Proof
.79391	257.8	175.2
.795	257.2	174.7
.800	254.5	173.0
.805	251.8	171.1
.810	248.8	169.1
.900	169.7	115.5
.910	158.6	107.9
.91984	147.1	Proof
.930	134.5	91.4

The complete tables contain 840 indications. Gilpin's tables have been used as the basis, but for gravities not included in them, the figures of recent investigators, including Squibb have been utilised. Mr. Scarlsbrick also described a sample holder for taking a fair sample of the bulk from a cask. In concluding, he said that if his proposals were adopted they would result in a substantial increase in the spirit revenue, but the liquor interest would be compensated by a reduction of the duty. Moreover, the revenue would be levied more equitably, because the system allows for the change in volume of alcohol through changes in temperature.

A discussion on the paper was opened by Mr. BIGGS (Lister & Biggs), and continued by Messrs. THOMAS TYRER, DAVID HOWARD, and E. J. MILLARD. The trend of this was to show that the difference in temperature experienced in London bonded stores is so slight that a change in the fiscal methods is not urgent, whereas in the North there is considerable variation, and Mr. Scarlsbrick's suggestions would meet with approval there.

The other paper (a somewhat theoretical one) was on the estimation of alizarin and allied colours.

LIVERPOOL SECTION.

At the first meeting of this section, which was held last week, the Chairman, Mr. EUSTACE CAREY (Ga-kell, Deacon & Co.), gave an exceedingly interesting address, in the course of which some "advanced" views were expressed in regard to the organisation and management of chemical-works. It is his opinion that good results would follow the introduction of

AN EIGHT-HOURS WORKING DAY

in chemical-works, and he gave a series of statistics showing the success which has attended its introduction in several works, leading to increased efficiency without increasing the cost of production. The early morning hours are, in his opinion, of little value, for the workmen come before they have had any food, and are unfit for really good work. In the concluding portion of the address Mr. Carey referred to the health of workmen in chemical-works, and gave instances of the gross misstatements which reached the public on this score. The sickness amongst the workmen, he said, is not above the average, and statements to the reverse effect were entirely due to ignorance.

In proposing a vote of thanks, Mr. E. K. MUSPRATT expressed his complete accordance with Mr. Carey in his remarks concerning the advantages of a shorter working-day, and also in respect to the prejudicial misstatements as to the health of the men in the works.

Mr. HENRY BRUNNER, the retiring chairman, seconded the vote.

Mr. T. W. STUART, of Newcastle, somewhat differed from Mr. Carey, for in his opinion the eight-hours day involved in many cases an increased cost, amounting in some cases to 40 per cent. He also gave some interesting statements in regard to the health of workmen, in corroboration of Mr. Carey's statement.

The vote was carried, and the meeting adjourned.

MANCHESTER SECTION.

This section opened on Friday evening, November 3. Professor Dixon presided, while Mr. IVAN LEVINSTEIN, Chairman of the Section, read a paper on the chemical industries, with notes on the development of the production of

ARTIFICIAL INDIGO AND INDIGO-CARMINE.

Referring to the various causes for the large decrease in our imports and exports for the first nine months in this year compared with the corresponding period in 1892, he said he thought it all the more gratifying, notwithstanding these exceptionally unfavourable circumstances, that the chemical industries were able to show an increase in exports of 372,952*l.* for the nine months over the same period in 1892. The only way to account for this increase was that they must have converted part of the raw materials formerly exported into higher finished goods commanding a higher price, and if this assumption were correct it would mean progress in the right direction. They had at last regained the advantage formerly possessed, in that they once more had alkali cheaper than their neighbours. This low price of alkali was, however, likely to cause the entire stoppage of the manufacture of soda by the old Leblanc process, and, combined with other reasons, will disturb the market values of such articles as caustic soda, salt and nitre cake, bleaching powder, and chlorates.

Taking a general retrospect of the coal-tar industry, he said it was very encouraging to see that this country had participated, if only to a modest extent, in the development of the dye industry. Amongst the large number of patents taken out again during the last twelve months were some for further improving the methods of producing artificial indigo. This country has a two-fold interest in this question, being the principal producer of indigo, the annual value of which represents 4,000,000*l.* Mr. Levinstein gave a sketch of the investigations which led up to the discovery whereby human hands may now artificially produce an unlimited quantity of a colouring-matter, the production of which hitherto was solely possible by nature's agency. He called special attention to the latest development in synthetic indigo, under which the latent dye is developed in the dyeing-vat, and illustrated his remarks by a series of interesting experiments. He afterwards expressed his great regret that this country had had so little part in the work that had enabled chemists to achieve these wonderful results. He had pointed out on frequent occasions the need for training chemists of the highest class, and he was glad to see that efforts were at last being made in various directions to improve our position. Before long the great educational institution of Owens College would be in a position to place at the disposal of Professor Perkin, jun., a laboratory which would be exclusively devoted to research work in organic chemistry.

Some of the experiments which Mr. Levinstein performed deserve note. In one there was made within a few minutes about 1 lb. weight of artificial indigo, and indigo-carmine was also produced by treating phenylglycocin with anhydrous sulphuric acid. The characteristic colour of the latter was shown by pouring the powerful acid mixtures on a large block of ice. A piece of woollen cloth was dyed with the solution thus obtained. Bayer and Drewsen's process was also illustrated. In this an acetone solution of orthonitrobenzaldehyde was treated with a dilute solution of alkali, whereby a product of condensation was formed, viz., the orthonitrophenylacetone, and this on the addition of more alkali was at once converted into indigo.

A vote of thanks was accorded to Mr. Levinstein for his address, and after a short paper by Mr. WILLIAM MARSHALL on "A New Dye-bath Arrangement for Experimental Dyeing," the meeting closed.

LEEDS SECTION.

At the meeting of this section on Monday, at the Queen's Hotel, Leeds, Professor A. SMITHELLS gave an address on "Technical Instruction in Chemistry from the Teacher's Point of View." In the course of his remarks Professor Smithells said that the present system, organised by the Science and Art Department, South Kensington, was very faulty, especially in respect to

the syllabus and in the inspection to which schools were subjected. The main point of his paper, however, was that a great deal of the failure of the English manufacturers to compete successfully with foreign producers was due not to the inferiority or lack of technical training of the workman, but to the shortsightedness of the masters in not employing chemists who were thoroughly trained. He believed that the prime need of the various chemical industries was the genius of the expert, and until skilled chemists were properly valued England would continue to import chemical products, and her industries would fall behind in the race for supremacy.

CHEMICAL SOCIETY.

No subject of very special interest was brought before the meeting of the Chemical Society on Thursday evening, November 2. Seven papers were down to be read, but, as might have been expected from a consideration of their nature, a considerable proportion found its way into the records of the Society without being primarily submitted to the ordeal of a public début. In other words, Dr. W. A. Bone's note on the "Formation of Indoxagen Derivatives," the record of the work of Drs. Mason and Winder on the "Synthesis of Piazine Derivatives," and Dr. Leicester's paper on the "Interaction of Quinones and Benzenoid Amines" were taken as read.

There was a very fair average attendance, and the first item on the list of agenda which engaged the attention of the meeting was the reading of the names and qualifications of candidates for election to membership. There seems to be promise of a great future before the Chemical Society if a fair judgment may be formed from the attainments of those followers of chemical science anxious to enroll themselves in it; it was found on Thursday that the reading of the qualifications of the intending members occupied so much time that it was necessary to altogether omit these particulars and confine attention merely to the names.

The scientific business of the meeting began with a note by Dr. ARMSTRONG on "Coloured Azo Compounds," a contribution to the researches upon the nature of colour in chemical bodies, with which the name of the President is so inseparably connected. Dr. KIPPING'S

HYDROCARBON FROM PHENYL-PROPIONIC ACID

was a complicated body containing in a closed ring two phenyl groups. The substance is apparently not entirely new to chemists, but the author rejected the formula which has been proposed for it, and suggested another based upon his own studies of its reactions. The most noteworthy physical property of the hydrocarbon is its insolubility in all ordinary solvents.

THE OTHER PAPERS.

though possessing some interest of a philosophic or academic nature, did not contain any matter of a specially striking character. Mr. V. H. VELEY, in a communication on the "Action of Chlorine on Quicklime," supplemented his previous work on this subject, special attention being given to the nature of the reaction under different conditions.

Mr. D. H. JACKSON had succeeded in preparing hyponitrite of ammonium—a fact which formed the chief point of a "Note on Hyponitrites." Professor DUNSTAN'S well-known association with this group of bodies prepaired everyone for his criticism of the formula for hyponitrous acid used by the author of the note. Recent work has indicated $\text{H}_2\text{N}_2\text{O}_2$ as the true representation of the molecule of the acid mentioned, but Mr. Jackson had adopted the earlier HNO .

Messrs. W. H. PENDLEBURY and M. MCKILLOP had something to say about "The Reaction between Hydrochloric Acid and Potassium Chlorate," but their observations had reference merely to the rather physical or physicochemical phenomena of the rate of chemical change between the two reacting compounds. Although such work has a distinct value, it is not very provocative of extempore discussion, and consequently there was little external evidence of interest in it. The paucity of discussion generally, with the reading of the papers in abstract, was responsible for the fact that the meeting was adjourned at a fairly early hour for the more social function of light refreshments upstairs.

CHEMISTS' ASSISTANTS' ASSOCIATION.

THE following paper was read at the evening meeting of the above Association, held at 103 Great Russell Street, on Thursday, October 26:—

THE EXAMINATION OF POTABLE WATERS.

By E. J. Parry, B.Sc.

The examination of potable waters falls under four chief headings—(1) physical examination; (2) estimation of inorganic constituents; (3) organic analysis (by far the most important); (4) biological examination.

1. *Physical Examination.*—Scrupulous care should be used in taking a sample of water. If possible, I supply my own bottles for this purpose. By scrupulous care I do not mean that absurd farce described in a recently-published German text-book, according to which the sampler must turn his shirt-sleeves up to a certain height, must scrub the arms with soap and water, and many other like precautions. The best bottle to use is a clean-stoppered Winchester quart, which should be rinsed out with the water to be sampled before filling. The water if coming from a tap should be allowed to run for a couple of minutes; if from a river, should by preference be taken in mid-stream and by opening the bottle under water.

Assuming that a sample has been taken with proper care, a water that is distinctly turbid, and possesses an unpleasant taste and odour, will of course be rejected on these grounds without further analysis. But if these are not present it is advisable in all cases to examine the colour of a water carefully. The best method of so doing is in my opinion by means of Lovibond's tintometer. This is a specially-arranged pair of white glass tubes, 2 feet long, and closed at one end with white microscope-glass. Pure distilled water is poured into one, and the sample to be examined into the other; a standard set of tinted glasses is used, and the colour of the sample can be imitated by placing the proper glasses over the tube containing the distilled water. The colour can then be expressed in terms of the accepted standard.

II. *Inorganic Analysis.*—A qualitative examination of a drinking-water is practically valueless, save in the case of a very polluted water. It may be restricted to the direct addition of Nessler's reagent, and to testing for nitrites and metals, and a rough estimate of its action on acidified permanganate of potassium. The chief determinations to be made are the—(1) solid residue, organic and inorganic, (2) chlorine, (3) phosphoric acid, (4) nitric acid, (5) nitrous acid, (6) sulphates, (7) hardness, (8) poisonous metals. In expressing any results here I shall use the "grains per gallon" system, the most unscientific, I admit, but the one best understood by the public, for whom the results are generally intended. To determine the total residue 70 c.c. is evaporated in a platinum dish on a water-bath and then heated to 110° in an air-bath. The increase in weight of the dish gives the residue, and since the milligramme bears the same relation to 70 c.c. as the grain does to the gallon, the number of milligrammes of the residue expresses the number of grains per gallon. The dish after being heated should be cooled in a desiccator before weighing, not left to cool in the air, as Wanklyn advises in his text-book on water-analysis. After weighing the dish should be ignited, and the effect observed. There should not be any blackening in the case of a pure water. The weight after ignition may be taken, but this is not of very much value.

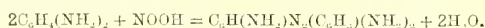
For the estimation of chlorine it is advisable to concentrate 210 c.c. to about 30 c.c., and titrate with a moderately weak solution of nitrate of silver. I find that a solution containing silver nitrate equivalent to 2 milligramme of chlorine per c.c. is the most convenient to use.

Since phosphoric acid exists but in very small quantities in drinking-water, a rough approximation only is necessary or, indeed, practicable. The solid residue from the water is treated with a few drops of nitric acid, and dried, to render traces of silica quite insoluble, then re-dissolved in a drop more of nitric acid, and 2 or 3 c.c. of water. This is filtered, and a few drops of an acid solution of molybdate of ammonia added, and the mixture gently warmed. The merest traces of phosphoric acid will give a yellow coloration, and very minute quantities give a distinct precipitate. If an estima-

tion is required, the colour may be imitated by a standard solution of sodium phosphate.

To estimate the sulphates any convenient quantity of water is concentrated, acidified with hydrochloric acid, and precipitated in the usual way with barium chloride. The estimation of the nitrates and nitrites is of considerable importance. There are, of course, several methods of estimating these, amongst which are the indigo method and the reduction method. Thorpe recommends the reduction method, carried out in the following way:—A copper-zinc couple is first prepared by immersing a strip of zinc foil in a dilute solution of copper sulphate until it is coated with a black spongy coating. This is then well washed, to get rid of the excess of copper sulphate, and 70 c.c. of the water is distilled from the couple. The nitric acid is reduced to ammonia, which is estimated in the usual way. I have made many hundreds of estimations with the copper-zinc method, but prefer to modify it slightly. Instead of distilling from the couple, I invariably leave the water on the couple for twenty-four hours at the ordinary temperature, and then remove the couple. The acids are completely reduced by this time, and the danger of breaking up any organic nitrogenous matter when boiled with a strong reducing agent is diminished. This method yields very satisfactory results. Each molecule of ammonia obtained corresponds to one of either nitric or nitrous acid, hence the result includes both of these if present, so that the nitrous acid must be estimated and deducted.

To estimate the nitrous acid it is most advantageous to use an acid solution of metaphenylenediamine. This gives a fine yellowish brown colour with nitrous acid, and this colour can be compared with that given by a known amount of a standard solution of KNO_2 , in exactly the same way as ammonia is estimated by Nessler's reagent. The brown colour is due to the formation of the well-known dye "Bismarck Brown," according to the reaction



The indigo process for the estimation of nitrites is by no means satisfactory. It depends upon the oxidation of the indigo by the acid and the consequent decoloration. The results are very variable, unless the conditions of the experiments are absolutely identical. Moreover a little organic matter interferes with the reaction to a marked extent. A somewhat popular method of estimating nitrites is the potassium iodide and starch one. This consists of imitating by means of standard solutions the colour produced by the action on starch of the iodine liberated from the potassium iodide by the nitrous acid. The estimation is conducted in Nessler glasses exactly as in the determination of ammonia. The limits of this test are one part of nitrous acid in ten millions in a few minutes, or one part in a thousand millions in 48 hours. Griess's test for nitrites is so delicate that it is difficult to use it quantitatively; it will quickly indicate one part of nitrous acid in a thousand millions. To 10 c.c. of the water to be tested are added successively one drop of dilute HCl, one drop of strong solution of sulphanilic acid, and one drop of saturated solution of naphthylamine hydrochloride. The colour produced is pink or red according to the strength. It is imitated in the usual way by means of standard solutions.

The hardness of water is of importance in several ways; chiefly when the water is being used for domestic purposes. In the case of water used only for drinking its chief significance is with regard to gouty diseases. The common method used to measure the hardness of water is that used by Dr. Clark many years ago. A standard solution of soap is prepared of such a strength that 1 c.c. exactly precipitates one milligramme of carbonate of lime, which is held in solution by the carbonic acid of the water. Into a wide-mouthed stoppered bottle (holding about 250 c.c.) 70 c.c. of the sample is poured. The soap solution is gradually added and the bottle well shaken after each addition, the point at which a permanent lather forms, or one which will last for five minutes is noted. This gives the total hardness, each cubic centimetre denoting one degree. If the hardness is more than 15 or 16 degrees, the water must be diluted with distilled water, so as to reduce it to this, and a smaller quantity used for the estimation, from which the hardness can be calculated. The permanent hardness is measured by the amount of soap solution required to produce a permanent

lather with the water after it has been boiled to remove carbonates. For this 70 c.c. of the water should be carefully boiled to about one-third of its bulk before the estimation.

For the examination for poisonous metals take either a concentrated portion of the water or the residue left on evaporation. The methods are simple, and are merely those used in ordinary work. For example, standard solutions of iron, copper and lead are prepared in the usual manner; then, if the water when concentrated to about a tenth part of its bulk gives a colouration with sulphide of ammonia when tested in a white porcelain dish, the colour should be imitated by operating on the standard solution, after ascertaining which metal is present. Copper in very minute quantities may be detected by the red colouration produced in the concentrated water by the addition of potassium ferrocyanide, especially if a little ammonium nitrate is added. If the colour be due to iron it will disappear upon adding an acid. Zinc may be detected in minute quantities by the milkiness produced by the addition of potassium ferrocyanide to the water even without concentration. I have found copper in samples of distilled water from the best London houses, and in sufficient quantity to condemn it as a drinking-water.

III. Organic Analysis.—The earliest method of our approximately ascertaining the amount of organic matter in water was the estimation of the volatile portion of the total solid residue. This is of no great value when we take into account that there are many other volatile substances besides organic matter. The hydrated salts will lose their water, calcium salts will lose their carbonic acid, and if the heat be very strong a certain amount of the chlorides will be volatilised and the nitrates will be invariably decomposed. The employment of permanganate of potassium as a means of oxidising the organic matter was, I believe, the next process used. This is still a most important method, and affords valuable information. Briefly, the method chiefly in use now is as follows:—A known quantity of the sample is allowed to stand for four hours at 80° in contact with a known quantity of a standard solution of permanganate of potassium with excess of dilute sulphuric acid; the amount of "permanganate" left at the end of the four hours is then estimated, and the amount absorbed thus found. The standard solution of permanganate is usually of such a strength that 10 c.c. contain enough to provide 1 milligramme of available oxygen, but the sulphuric acid will absorb a small quantity of the permanganate, hence it is usual to do a blank estimation first in the following way:—

Standard water and acid are prepared by adding a few drops of weak solution of potassium permanganate to distilled water mixed with a sufficient volume of 10-per-cent. sulphuric acid, until, after standing in the light for a day, the faintest possible pink colour remains. The same quantity of the standard water is used for the blank, as is that of the sample to be examined, and 10 c.c. of acid are added to each; 10 c.c. of standard solution of potassium permanganate are now added to each, and both allowed to stand for the same time under the same conditions; at the expiration of the time a few drops of solution of potassium iodide are added to each. This reacts with the undecomposed permanganate with the liberation of iodine. The free iodine is now estimated with sodium thiosulphate solution, using starch as our indicator. The strength of the thiosulphate solution need not be exactly known, as it is not necessary for the calculation. Thus, we know that the blank has just one milligramme of available oxygen, therefore a corresponding quantity of iodine is liberated. Suppose that this requires 20 c.c. of the thiosulphate solution for its decoloration. The sample, of course, contains less available oxygen now, since a portion of it has been absorbed; hence the liberated iodine will only require, say, 15 c.c. for decoloration, therefore there has disappeared $\frac{1}{4}$ milligramme of available oxygen. If the sample had required only 10 c.c., then $\frac{1}{2}$ milligramme would have been absorbed. Recently, in conjunction with some colleagues, I have been estimating the amount of free dissolved oxygen in a series of about 1,200 samples taken from the Thames. As might be expected, the amounts of oxygen found in the water also varied, although not sufficiently to show any exact proportion, inversely as the amount absorbed from permanganate.

It has been urged as an objection to this process that albumen does not readily absorb oxygen from the potassium

permanganate, and hence the albumenoid matter will not be fairly estimated; whatever be the nature of the organic impurities—it is easy to talk of albumenoids, &c., but more difficult to produce much evidence as to the real nature of these impurities—there is no doubt that the oxygen absorbed from permanganate, the so-called “albumenoid ammonia” of Wanklyn, and the direct estimation of organic carbon and nitrogen by Frankland’s process, show results almost always coincident, and if curves be drawn of the results of the examination of a large number of waters, it will be found that they run not far from parallel to each other.

A modification of the permanganate process has been used, but not to a large extent, which is known as the moist combustion process. This consists in boiling a litre of water down to 100 c.c. with permanganate of potassium, so as to oxidise the organic matter as fully as possible; the amount of permanganate used up is then estimated.

The processes in most general use now are Wanklyn’s and Frankland’s. Wanklyn’s is used by far the most generally on account of its simplicity. Frankland’s is somewhat tedious, especially if but few samples are analysed. It is also expensive and difficult to manipulate. Wanklyn states that “the process is untrustworthy and, being also difficult and costly, has not met with general acceptance.” I shall not comment on this statement, as any who remember the now historic quarrel between the rival processes will judge how much sodium chloride must be added to it in order to ensure its digestion.

For Wanklyn’s process the following solutions are needed. *Standard Ammonia*: 0.3146 gramme of ammonium chloride dissolved in 1 litre of distilled water free from ammonia.

Nessler Solution: This reagent is prepared by dissolving 35 grammes of KI in 100 c.c. of water, 17 grammes of HgCl_2 , by the aid of heat in 300 c.c. of water and cooling. The mercuric solution is added to the iodide little by little, until a slight permanent precipitate is formed. The liquid is now made up to 1 litre with 20 per cent. soda-solution; the addition of a little more HgCl_2 solution will render it more sensitive. The liquid is now allowed to settle, and the clear supernatant fluid is used. The great secret of preparing a good Nessler reagent is in having the ingredients quite cold when mixing. *Alkaline Permanganate Solution*: Dissolve 8 grammes of potassium permanganate and 200 grammes of NaOH in 1,100 c.c. of distilled water; boil down to about two thirds of its bulk to ensure breaking up any nitrogenous organic matter, and preserve in a bottle with a closely-fitting stopper.

All the water used for preparing the reagents must be quite free from ammonia. If a small quantity only is used the water is best prepared by distilling tap-water with a few drops of H_2SO_4 . If, however, a large quantity is required, it is best to allow a large still to run for a couple of hours, and then commence to collect the distillate. For drinking-waters it is usually convenient to take 700 c.c. for the estimation. The still used is first boiled out so as to ensure the condenser being free from ammonia, and then the sample is distilled over until no more ammonia is found in the distillate. It is usual to collect 50 c.c. in graduated glasses known as Nessler glasses, and test each 50 as it is collected by imitating the colour produced by the Nessler reagent in similar glasses, using the standard solution of ammonia. Before distilling, a grain or so of ignited Na_2CO_3 may be added to ensure the ammonia being volatilised. This will give the free ammonia (so-called). As a matter of fact, other bodies will yield ammonia by this treatment. The “albumenoid” ammonia is estimated by adding 50 c.c. of the alkaline permanganate solution to the water in the retort from which the ammonia has been distilled and again distilling. More ammonia is now given off due to the decomposition of the nitrogenous organic matter by means of the permanganate. This is estimated in the same way. The process is rapid and approximate, but nothing more, for different organic bodies give off very different percentages of their total nitrogen when submitted to this treatment. Hence the amount of nitrogen found is no guide to the amount of organic matter present. Further, when a sample has been distilled with the alkaline permanganates until not a trace of ammonia is given off, and the analyst might conclude that he has obtained all that he can, it will be found that by continuing the distillation no more ammonia will appear for some time, unless it will

suddenly re-appear, on account, no doubt, of the increased concentration of the permanganate solution in the retort, and the consequent higher temperature obtained; hence in certain cases the indications are somewhat difficult to follow. For a more or less useful process this is very valuable; but it shows painfully the necessity of a scientific process such as Dr. Frankland’s is. This, though no doubt open to certain objections, is the most valuable, and, at the same time, the most tedious of all the processes in water analysis.

The Frankland-Armstrong process, as it is often called, is an attempt to estimate the absolute quantity of carbon and nitrogen present in the water in the form of organic compounds. A litre, or less, if the water be a poor one, is the quantity usually operated upon. Every vessel or tube used for this process must be scrupulously clean, and should be washed with strong sulphuric acid and then with the purest water possible before use. The reagents, too, must be free from all organic contamination. Of these the following are necessary:—(1) Pure copper oxide. This should be burned in a muffle for four to five hours before it is used. I often burn it for even longer than this; (2) a pure saturated solution of sulphur dioxide in organically pure water; (3) a similar solution of acid sulphite of sodium with excess of SO_2 ; (4) a solution of ferrous chloride as free from ferric salts as possible.

The sample is placed in a flask, holding about a litre and a half; 10 c.c. of the SO_2 solution, and 10 c.c. of the sulphite solution are then added together with three or four drops of the ferrous chloride solution. The whole is then raised to the boiling point, boiled for half a minute to expel CO_2 , cooled, and then put into a special form of evaporating apparatus, which protects it from the atmosphere and evaporated to dryness over a water-bath. In the meantime a glass combustion tube has been prepared, about 20 inches long, closed at one end. The dry mixture is then carefully detached with a flexible spatula and mixed with copper oxide in the usual way, and packed in the tube. A plug of copper gauze is inserted at the front end of the tube, allowing about 8 inches of the tube to remain empty. This is then softened in the blow-pipe flame and drawn out to a narrow bore. By means of this narrow portion it is connected with a vacuum pump adjoining the furnace in which the tube is to be burned. The joints are made with thick india-rubber pressure tubing, and are all covered with water or mercury, so that no air can be sucked in. After the tube is rendered vacuous the jets are lighted gradually, and the tube burned for an hour to an hour and a half. The gases are then pumped over. From the ordinary London water, they seldom, if ever, exceed 6 or 7 c.c. These are collected over mercury and then estimated. As a rule they consist of a mixture of SO_2 , CO_2 , NO and N . The SO_2 is absorbed in a Frankland’s gas apparatus by means of potassium bichromate; the CO_2 is next absorbed by strong potash; the NO is then oxidised by means of free oxygen to NO_2 , which is thus absorbed by the potash already added; the excess of oxygen is removed by pyrogallol, and the residual gas is pure N . The sulphurous acid is added in order to destroy any nitrates or carbonates present, in order to get rid of all inorganic carbon and nitrogen, and the ferrous chloride aids in the destruction of the nitrates. As will be seen, the process is very long, tedious, and expensive, but if worked with scrupulous care gives results of the maximum value.

IV. Biological Examination.—The examination of a water should not be considered complete unless a biological examination of some kind has been conducted. The suspended matters in the water should, at least, be carefully examined under the microscope, in order to see what evidence of organic pollution remains in the shape of muscular tissue or vegetable cells, or even in second-rate water, large-living organisms. The ordinary bacteriological examination by which an attempt is made to enumerate the organisms, is of relative value only, and for hygienic purposes, I consider, of little value. If, however, placed in the hands of a specialist with a view of determining whether definite pathogenic organisms are present or not, it may be made of considerable value. The presence of muscular fibre is of great importance, and points to either sewage or other objectionable organic refuse. After having obtained the figures of a water analysis, it becomes of great importance to correctly interpret them. All I can say on this point is that no great stress must be laid on any single figure (except in very clear cases), but that

all the results must be viewed together, and then more correctly the more that is known of the history of the water. To attempt to value a water by a scale is, in my opinion, exceedingly misleading. In Wigner's scale, for example, each factor has a separate value, and these values added together give the value of the water. Muter's scale is, I fancy, similar. This means that each factor is considered separately. Thus, for example, a splendid water near the sea-coast will show a very high figure for chlorine, but this will in no way lessen the true value of the water, whilst on the scale results it will make it a good deal more. Whilst the actual chemical results of a water analysis are of the highest value, I think that it is of almost equal importance to know as much as possible of the history of the sample. But the chief portion of the work must be with the chemist, and not with the medical officer, as certain well-known authorities have advocated. In conclusion, I fancy it is fairly well agreed that water analysis is not in so satisfactory a state at present, as it is to be hoped it will be in the near future when the methods of analytical research will, it is probable, be of a finer and more exact nature than is the case in many ways at present.

DISCUSSION.

The PRESIDENT remarked that pharmacists did not appear to grasp the idea that water analysis was their legitimate work, and consequently they either sent it to a specialist or to their wholesale house to get it done for them. It was a thing that paid very well for the time and trouble expended; he thought all pharmacists should make a study of it. They should also test their distilled water. This was frequently very bad, and if complaints were made by medical men of its inferiority, the lame excuse which they put forward, that it was just as they received it from their wholesale house, was at the best a bad one. No doubt Frankland's method for estimating the organic impurities in water was an excellent one, but it was not applicable for pharmacists' use, as was Wanklyn's. Whichever process was used, and whatever results were obtained, the skill most needed was to be able to interpret these, and in order to be able to do this, experience was needed; in forming an opinion upon the quality of a water, its history and source were most important factors. He should advise all young pharmacists to make a study of it, and in beginning to carefully preserve their notes for future reference.

Mr. KILBY PEARS cautioned novices against being too ready to express an opinion upon the matter, and suggested that they should begin by always checking their results with those of an older and more experienced analyst. Pharmacists were generally content if their distilled water gave no colour with silver nitrate, but this was not sufficient, for most of the distilled water supplied by wholesale houses was impure.

Mr. MILLARD considered that "parts per million" was a preferable way of expressing results, and was as well understood by the public as grains per gallon. It was novel to him to concentrate the water before estimating the chlorine, and he did not think it necessary. The solubility of silver chromate was not sufficient to vitiate results. In estimating nitrates by the zinc-copper couple process, he strongly recommended leaving the couple in the water for the longer period, but thought it necessary that in serious cases the water should be distilled before Nesslerizing, for with hard waters the addition of the Nessler reagent produced such a turbidity that the colour could not be judged. He believed Stokes advocated filtering the water from the couple, and in some cases, this was all that was necessary. Mr. Millard also found that the solution of metaphenylenediamine soon became coloured and useless. He was of Mr. Wanklyn's opinion, that the Frankland method "was unreliable in the hands of inexperienced workers," and not only in their hands, for the Society of Public Analysts had come to the conclusion that corresponding results could not be obtained by the Frankland method, and they decided to adopt the Wanklyn one. The biological examination of waters was in a very unsatisfactory state at present. It was by no means proved that it was the micro-organisms themselves that produced disease, or whether it was the products formed by them—the toxins, toxalbumins, or ptomaines. The biological examination was of relatively little service in forming an opinion upon the value of water,

but the number of colonies produced per c.c. was some indication.

Mr. GANE thought colour was of very little use as a guide. He had often seen perfectly bright and clear samples, possessing no colour, but being very bad waters. He found if there was not more than 1 grain per gallon of nitrates present, the copper-zinc couple method was not reliable for their estimation of them. In testing for nitrites with starch and potassium iodide he thought a shorter time should intervene before noting the result, for he found that pure distilled water gave some colouration when so tested, if allowed to stand some time. The soap-test for hardness was not capable of yielding concordant results with different operators, for ideas differed as to the permanency of a lather. He thought Mr. Parry rather hard upon the Wanklyn process. Some loss generally occurred in the Frankland process when the residue was being scraped out of the dish in order to put it into the combustion tube.

Mr. JONES was in favour of expressing results as "parts per million." He thought the estimation of phosphates unnecessary in the case of hard waters, because they were entirely precipitated by the carbonate of calcium present. In estimating the oxygen absorption, he preferred to titrate the excess of permanganate by means of thiosulphate, and to use potassium iodide and starch as an indicator, to relying upon the decoloration which denoted the end reaction when using oxalic acid. Had Mr. Parry used the modification of the Kjeldahl process which was being advocated now for the estimation of nitrogen?

Mr. FELL had never found it necessary to concentrate water before estimating the chlorine. He could not understand Mr. Jones preferring thiosulphate to oxalic acid for titrating permanganate, and thought accuracy was more likely to be obtained by using ferrous sulphate or oxalic acid.

Mr. SAGE disagreed with the speakers who so condemned the distilled water supplied by wholesale houses, and was of his old opinion that the impurity was generally due to "after-contamination." He knew wholesale houses who took great care in the preparation of distilled water, and denied that it was largely engine waste-steam condensed. He found the solution of metaphenylenediamine hydrochloride soon became brown, and consequently was useless. One speaker had referred to the production of a colour in pure distilled water when treated with potassium iodide, starch, and acid. He had found that light was the cause of this.

Mr. PARRY, in replying, said, in reference to concentrating water before estimation of the chlorine, it had been found that the error amounted to 33 per cent. in the case of some waters. He referred his hearers to a work published by Young and T. Fairley in the *Analyst*, this year. Mr. Millard's idea that the number of micro-organisms found, when examining a water biologically, was any guide to a water being either good or bad, was erroneous. In the course of some work which he (Mr. Parry) had done, he had found that in the Kent Water Company's water as supplied to London there were 2,000 organisms per cubic centimetre. Dr. Stevenson had found 1,800 in the same water. This was acknowledged to be the best water supplied to London; and yet in the Southwark water, which was drawn from the Thames at Sunbury, he had only been able to discover between 300 and 400 per c.c. Phosphates were appreciably soluble even in the presence of calcium carbonate, and regarding Mr. Gane's suggestion as to inaccuracies in the working of the soap-test, Mr. Parry remarked that it was customary for every chemist to make out or standardise his own soap-solution, and consequently he would always work to the same lather.

HOW SHALL WE CHECK UNJUST TRADE?

At the Chemists' Assistants' Association, on November 2, discussion on the subject named above was provided. The subject was first dealt with in a paper by Mr. C. E. Pickering, which was read by the Literary Secretary, in the unavoidable absence of the author. Mr. Pickering said the chief point he wished to bring forward was the growing tendency of limited liability companies to defeat the intentions of the Pharmacy Act. Since that memorable case *The Pharmaceutical Society v. The London and Provincial Supply Association*, these companies had been gradually improving

their position, and apparently without the Pharmaceutical Society being able to stop them. Is it fair competition that unqualified men who have no knowledge whatever of drugs, should be able to all intents and purposes to keep open shop for the dispensing and sale of poisons, because they are covered by at least one qualified assistant? Are we, who have been put to much expense and trouble to obey the provisions of the Pharmacy Act, to have no protection or privilege in return? What shall our vaunted superior knowledge avail against such odds as these? The law compels a man to pass through an expensive and laborious course of study in order to prove that he is competent to dispense poisons and to style himself a chemist and druggist, whilst a flaw in the same law allows seven—it may be quite illiterate—persons to form a limited company, style themselves chemists and druggists, and then by the aid of one duly qualified man to supervise dangerous sales, to ruin the prospects of all the chemists in business for miles round. This is unjust trade. It is questionable whether, under these conditions, the qualified man is to exercise his judgment in regard to the quality of the drugs supplied; whether, at some of the ridiculously low prices charged, the price paid for the articles is not the chief consideration, and the quality ignored entirely. This Association could do much to check the state of things described. So long as these companies are able to secure the services of duly qualified men, so long will they continue to flourish and increase, unless prevented by legislation.

Mr. Pickering then selected from the records in THE CHEMIST AND DRUGGIST of this year about a dozen typical illustrations of companies registered to carry on the business of chemists and druggists, often without a single chemist or druggist being among the original shareholders. He urged that it was the duty of the Association to condemn this unjust extension of our semi-profession, and that assistants and members of the trade throughout the land should do all in their power to check this flow of capital which is being so unjustly laid out. After touching on other topics, Mr. Pickering concluded by moving that the Association was of opinion—

1. That the widows' clause of the Pharmaceutical Society's by-laws should be rescinded.
2. That the Society should have power to remove from the register any person found guilty of unprofessional conduct, one such act being to assist any person or persons to carry on the business of chemist and druggist, or pharmacist, such person or persons not being themselves duly qualified by examination.
3. That a copy of these resolutions be sent to the Council of the Pharmaceutical Society, and that provincial associations be invited to discuss and pass similar resolutions.
4. That, to promote unity, this Association is in favour of the promotion of a federation of pharmaceutical associations.

The PRESIDENT said it certainly was anomalous that a person who was unqualified was not allowed to carry on a business, whilst several such persons could combine and do so; but because it was an absurd state of affairs it was not necessarily a grievance. For his part he could not see that it mattered who supplied the capital for a business—whether a man borrowed it of six friends, or whether the seven joined together and formed a company, for the public were just as well protected whoever supplied the capital. It must, however, be remembered that when a man was in business on his own account, he felt entirely responsible, and so endeavoured to maintain as high a standard of purity in his drugs and preparations as possible; but when he was the manager of a company, and was given to understand that it was profit which was required of him, he shifted the responsibility to the company, and so was tempted to let his quality run down. It was right to aim to prevent unjust trading; but where a company employed a qualified manager and qualified assistants to do the dispensing, chemists had no ground for complaint, and before crying out they must see that their own hands are clean, and not keep unqualified assistants to do responsible work.

Mr. GANE thought Mr. Pickering had no right to criticise or slander the limited companies, nor to say that their mode of trading was unjust. It was practically impossible to stop companies carrying on such a trade. Nor could he agree with Mr. Pickering that there was any necessity to rescind the widows' clause, for it would make it very hard for a chemist's widow whose husband died comparatively young.

Mr. TICKLE said he could see no reason for rescinding the widows' clause, and thought it would be a great hardship in many cases to the widow. There were black sheep in every flock, and more than there ought to be among chemists, but the increased standard and requirements of the examinations are doing much to decrease them. It was not necessary that only the cleverest men should be chemists, but it was needful for every qualified man to know his business thoroughly and understand what he was selling; but to overcome any flaw in the laws relative to the trading of pharmacists, he thought that a higher moral standpoint was all that was necessary to overcome the existing difficulties.

Mr. CARE objected to the use of the word "semi-profession," because it was incorrect; in the eye of the law we were only acting as professional men.

Mr. TICKLE, Mr. CARE, Mr. JONES, Mr. DUNNING, and Mr. SAGE, all opposed the repeal of the widows' clause, and generally expressed views in regard to company-trading less pronounced than those put forward in the paper. Mr. ANDERSON, however, considered that a chemist's widow had no more claim to be specially provided for than a doctor's widow.

Mr. Pickering's proposals were voted on separately. For the repeal of the widows' clause only one hand was held up. For the second, an amendment proposed by Mr. GANE, that—

This Meeting is of opinion that the Pharmaceutical Society should form a code of ethics for pharmacists, and should have power to remove from the Register the names of persons guilty of breaches of this code,

was carried. When the PRESIDENT put the third proposition,

Mr. SAGE asked whether it would not be futile, in the face of past experience, to communicate with other assistants' associations. Whereupon the PRESIDENT explained how, up to the present, the local associations who had promised help in the movement for obtaining shorter hours for assistants had fallen short of their promise. The third proposition was at last carried, as was the fourth, without further dissent.

The PRESIDENT, at the close of the discussion, stated that the Council of the Association would be represented in the Federation of Local Associations.

MIDLAND PHARMACEUTICAL ASSOCIATION.

WE reported last week Dr. Symes' address to this Association at its opening meeting. The meeting was well attended, the company including a number of ladies. The President, Mr. C. Thompson, was in the chair, and introduced Dr. Symes to the meeting as their old friend. Before Dr. Symes delivered his address he would ask him, in the name of the Association, to present to Mr. F. H. Alcock, F.I.C., F.C.S., their late honorary secretary, a polarimeter as a token of their esteem, on his resigning the office he had so ably filled.

Dr. SYMES, in asking Mr. Alcock to accept the instrument, spoke of the amount of work which devolved upon a secretary of such an association.

Mr. W. JONES remarked that the subscriptions to the present came in spontaneously, and the whole thing was managed in a few days.

Mr. ALCOCK, in acknowledgment, expressed his thanks for the expressions of goodwill shown towards him, and said he was sorry that other business compelled him to resign the post of honorary secretary. He hoped he would be able to do further work for the Association. (Hear, hear.)

The CHAIRMAN said it was not his intention to refer to any of the political subjects which were before them, but there were one or two home matters which it might be well for him to bring under their notice at the commencement of the session. The first was that they had changed both their name and their method of election. Their object, however, was the same—to secure the general advancement, and promote the interests of all engaged in pharmacy. A committee had been appointed to arrange a series of classes for their junior members, and although on several previous occasions they had failed to make similar classes successful, for lack of students, they were attacking the subject again, and he had reason to hope that at no distant date they would arrange a two or three years' course of instruction quite

equal to any in the country. Moving around as he had to do in the exercise of his duty as local secretary, he was astonished that their younger men did not join together and form a junior association. There were plenty of them in Birmingham and the neighbourhood to form a strong association, and he was sure the older Association would give them considerable help and encouragement. He was surprised at the apathy shown by many members of the trade in questions of importance which affected them, and he appealed to those gentlemen to shake the dust from the shelves of their experience, to put new fittings into the pharmacy of their existence, and come out from their own limited nutshells and join them in the forward movement. (Applause.)

After Dr. Symes had delivered his address Councillor BARCLAY moved a vote of thanks to him for it. He said Dr. Symes had for thirty years and more devoted his energy and ability to the cause of pharmaceutical improvement. It was delightful to find him, after so many battles, still willing to stand in the front. They knew that whilst he was a member of the council, although he did not always have it all his own way, he did an immense amount of good work. He thought with the Doctor that they could never expect thorough success in teaching, or in getting hold of the students, unless they held classes in which there was an enforced curriculum, and he hoped that members of the Council and the trade would look to that. When youthful character was being formed was the time that the teaching should be given, and then the inoculation of habits of industry and carefulness in their businesses would be of the greatest advantage. (Hear, hear.)

Mr. R. D. GIBBS seconded the vote. He believed one of the great difficulties pharmacists were under was that in the past they had not held up their heads as high as they ought to have done.

The CHAIRMAN said Dr. Symes's address had touched upon many subjects of interest, but time would not then permit reference to them. There were two—federation and representation—which they were taking an active part in, and he desired to say that the scheme of federation had been received very well throughout the country, and there was no reason why it should not benefit the trade at large. (Hear, hear.)

The proposition was unanimously carried, and Dr. SYMES briefly responded.

The remainder of the evening was occupied in vocal and instrumental selections.

FORMATION OF A CHEMISTS' ASSOCIATION AT PLYMOUTH.

A MEETING was held at the Mechanics' Institute, Plymouth, on Thursday, Nov. 2, to form a Chemists' Association. Those present were:—Messrs. J. G. Netting (in the chair), R. F. Roper, Freeman W. Hunt, F. J. Weary, F. Maitland, J. Harvey Bailey, J. Coeks, W. U. Carveth, C. J. Park, Condy U'ren, R. H. Rendle, A. D. Breeze, W. Sleep. Letters regretting inability to attend were read from Messrs. Allen, Maurice, F. F. Coeks, Kelly, Breeze, Codd, Woods, Davey, Dyer, S. Williams, T. Williams, Johnson, and Martin.

The CHAIRMAN drew attention to the fact that at a similar meeting held some time since, it was resolved that it was desirable that an association for the chemists of Plymouth, Devonport, Stonehouse, and district should be formed. A sub-committee was appointed to draw up a code of rules to submit to a meeting of proposed members. This meeting, to which all chemists in the Three Towns had been invited, would now discuss those rules, to which Messrs. Hunt and Roper had devoted a deal of time, and make such alterations, if any, as may be desirable. After discussion the rules were adopted. The Society is to be known as the "Three Towns and District Chemists' Association," and the annual subscription is to be:—Masters, 5s.; assistants, 2s. 6d.; and apprentices, 1s. The annual meeting is to be held in October, and ordinary meetings not less than once a quarter. On matters of a purely trade nature registered chemists only are to vote. Messrs. F. W. Hunt and R. F. Roper were appointed Honorary Secretary and Treasurer (*pro tem.*) respectively. The meeting was adjourned until November 15, at 3 P.M., for the election of officers and other business, when all who propose joining the Association are desired to be present.

GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

ON Friday evening, November 3, a smoking-concert, under the auspices of this Association, was held in the Alexandra Hotel. The weather was unpropitious, but in spite of the rain-torrents between 60 and 70 gentlemen put in an appearance, and a very pleasant evening was spent.

THE LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

THE usual fortnightly meeting was held at the University College on November 2, Mr. T. H. Wardleworth, Vice-President, in the chair. Professor R. J. HARVEY GIBSON delivered an address on "Recent Researches in Fungology," in which he expounded the views of the two principal schools of workers on fungi—those of De Bary and of Brefeld. It was pointed out that De Bary's scheme of classification depends on the recognition of sexuality in higher as well as lower fungi, and especially among ascomycetes; whilst Brefeld's classification recognises no sexuality in groups higher than the phycomycetes. In the course of his remarks, the Lecturer referred to the recent investigations of Alfred Müller as to the growth of fungi by certain species of Brazilian ants. Müller has traced the life-history of these ants in connection with the cultivation of certain fungi. Leaves from certain trees are gathered by one section of the ant colony, and when received in the nest are masticated until a pulp is formed. Other ants now take the mass in hand, mixing it with granulated earth, and then lay it in beds. Ants were then seen to take some mycelium from another part of the colony and spread it over the beds. In a short time fungi appeared, and were the object of much attention from the ants. Müller, to his astonishment, found that the ants were actually engaged in cutting away the reproductive organs of the fungi so as to induce an abnormal growth of tissue. He also discovered that the cultures were perfectly pure, not a bacterium being found among the growths. The result of the ants' action was the development of glands containing saccharine substances, which seemed to be highly prized by the ants. Throughout the whole colony he noticed the sharpest division of labour, there being apparently head gardeners, gardeners, under-gardeners, labourers, leaf-getters, each section keeping closely to its own work. The lecture was illustrated by copious drawings and photographs.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.

THE first general meeting of the above Society was held on Wednesday evening in the rooms of the Society, Surrey Street. The President (Mr. G. T. W. Newsholme, F.C.S.) was in the chair. He announced that Mr. Walter Hills had presented the Society with a bust of the late Jacob Bell.

Mr. J. AUSTIN read a paper on "Pharmaceutical Microscopy," which contained much valuable advice and information. He explained how essential was a knowledge of microscopy to the pharmacist of the present day, and recommended all young students to become early acquainted with the microscope, advising such at the commencement of their studies to carry a simple lens in their waistcoat-pocket. Botany without the aid of the microscope would scarcely be a science. Every pharmacist should be able to ascertain the purity or otherwise of his preparations and chemicals, and he ought also to possess a thorough knowledge of the quality of the crude drugs he kept in stock. Microscopic pharmacognosy, he contended, in its infancy, and much work remained to be done, especially in that part of it which dealt with the microscopical appearance of powdered drugs. The question of the adulteration of drugs, powders, &c., was a serious one to the chemist, for the evil was growing. Seeing how easily they could be detected by anyone acquainted with microscopy, it was surprising that these forms of adulteration were allowed to go on. He thought the British Pharmacopoeia did not recognise microscopy as it ought. He also urged the importance of chemists making themselves acquainted with bacteria, which constituted one of the worst forms of pest that they had to contend with. Bacteria made fearful havoc with many of their preparations.

Legal Reports.

SOMERSET HOUSE CHEMISTS AND VINEGAR.

ANOTHER vinegar case has been decided against the public analyst after reference to Somerset House. Mr. Pattison, county analyst, had stated the vinegar to be diluted 45 per cent. The following statement was received from the Somerset House authorities:—"The sample of vinegar referred to in your communication of October 10, and marked 'No. 3 malt vinegar, Morpeth,' was received here on the following day. The sample was securely sealed. We hereby certify that we have analysed the vinegar, and declare the results as follows:—Acetic acid 3.90 per cent.; total solids, 2.22 per cent.; mineral matter (ash), 0.276; phosphoric acid (P_2O_5), 0.0153; specific gravity 1.0150. From a consideration of the results of the analysis, including ash and extractive matters, we are of opinion that the vinegar does not contain any added acetic acid, and we are further of opinion that it corresponds with malt vinegar made from malt and unmalting grain. Witness our hands this 28th day of October, 1893. (Signed), R. Bannister, F.I.C., F.C.S.; G. Lewin, F.I.C." The Magistrates dismissed the case.

FALSE TRADE DESCRIPTION OF VINEGAR.

AT Callington Petty Sessions on November 2, James Guest was charged under the Merchandise Marks Act with selling vinegar purporting to be Fardon's, but which was falsely labelled. The defendant in this case had a shop, but his mother-in-law, a Mrs. Goldsworthy, kept it. Messrs. Fardon had information which led them to believe that vinegar at this shop was being sold from their cask, but that it was not of their manufacture. Mr. Northey, a solicitor, deposed to visiting defendant's shop on September 6, and asking for a pint of vinegar from Mrs. Goldsworthy. She said it was the best vinegar, but was not certain who was the maker, but the name was on the cask. He found at the end of the cask "Fardon" burnt in. He informed Mrs. Goldsworthy that he intended to have the vinegar analysed. The sample was despatched to Mr. Jones, Wolverhampton.

Inspector Hacker, who accompanied the previous witness, corroborated, and said he purchased 3 pints of vinegar for the purpose of analysis.

Asked by the Bench for an explanation, Mrs. Goldsworthy said she knew it was not Fardon's vinegar, because Mr. Cook did not sell it.

The Chairman told her to sit down, remarking that she was making her case worse, as she knew more than the Court thought she did.

Mr. Trehane, who appeared for Messrs. Fardon, said his clients did not ask for any costs.

The Chairman, addressing defendant, said he was responsible for his goods being what they purported to be. At first the impression made upon him and his colleagues was that it was a case of innocence; but there had been no proof of innocence. There had been a good deal of carelessness. Some people supposed that if they sold an article equal in quality to that advertised or labelled they were complying with the law. That was not so. The law considered that every trader ought to be competent to ascertain the genuineness of the goods he offered for sale. Defendant would be fined 1*l.*, and 8*s.* 6*d.* police costs, the other costs being kindly remitted by the prosecutor.

On the next day at Launceston, W. Cook, provision-merchant, was summoned under the Merchandise Marks Act or "unlawfully selling a certain article of goods, to wit vinegar, to which a false trade description—to wit, 'Fardon's vinegar'—was falsely applied." Mr. Trehane prosecuted on behalf of Fardon & Co. (Limited), Birmingham; and Mr. Graham White defended.

From the evidence it appeared that Mrs. Goldsworthy gave in order to the defendant's son for some vinegar. She had cask with Fardon's name burnt in. Mr. Cook told her they did not keep Fardon's vinegar, but offered to fill a barrel she

had in her possession with Stephens's vinegar. He washed Fardon's label off, and another label was placed over the burnt-in name. Mrs. Goldsworthy said she had not sold the vinegar as Fardon's. For the defence it was urged that every information and assistance had been given to the prosecutors, and that there had no been intention of deceiving.

After a lengthy consideration, the Mayor said the Bench were of opinion that defendant had not the slightest intention or wish to deceive the purchaser of the vinegar. There was no doubt, however, that he allowed Stephens's vinegar to be placed in Fardon's cask, and had acted negligently. They thought the ends of justice would be met by defendant paying his own costs and contributing 2*l.* towards the cost of the prosecution.

PHARMACY PROSECUTIONS IN GLASGOW.

IN the Glasgow Sheriff Court, on Thursday, November 2 [as reported telegraphically last week], eight persons were brought before Sheriff Birnie, at the instance of Mr. Richard Brembridge, Registrar of the Pharmaceutical Society, charged with breaches of the Pharmacy Act of 1868. Mr. J. Rutherford Hill, Edinburgh, and Mr. J. M. Barrie, writer, Glasgow, were present as representing the Pharmaceutical Society.

The first case called was that against Robert Fleming, grocer and provision-merchant, 117 Houston Street. He was charged under the 1st and 15th sections of the Act with having, on June 15 and July 28, "he not being a duly registered pharmaceutical chemist, or chemist and druggist, within the meaning of the Act," kept open shop for the retailing, dispensing, or compounding of poisons, and sold by retail to Joseph Tait, 21 Oxford Street, Edinburgh, a preparation known as "Dr. J. Collis Browne's chlorodyne," containing a quantity of chloroform and a quantity of morphia, whereby he was liable to a penalty of 5*l.*

He pleaded not guilty, and the case was adjourned for trial till November 23.

Mrs. Agnes Walker, who keeps a drug-shop at 10 Candle-riggs, denied having sold quantities of oxalic acid to an official of the Society on the same dates, and her case was also adjourned for trial.

The next three persons who stepped forward to the bar were assistants in shops occupied by Dr. Hugh Kelly, at 114 Clarence Street, and 133 West Scotland Street. Those from the Clarence Street shop, who were charged with selling oxalic acid, were William Reid Craig and James Downie. Downie is a mere hoy, and the Sheriff was so struck by one of his years being brought before him on such a charge, that he stared at the youngster and asked him "if he kept a shop." "No, sir," replied the little fellow; and Mr. Hill explained that Downie stood in the shop. William Tomlinson is the name of the assistant from Dr. Kelly's West Scotland Street shop, and against him were two charges, (1) of selling oxalic acid, and (2) selling quantities of prussic acid, opium, and chloroform, being part of the ingredients of a mixture alleged to have been dispensed by him.

Pleas of not guilty were put in and the trials were adjourned.

Robert White and Hugh Miller, assistants in the drug-shop occupied by Dr. James W. White, at 13 Morrison Street, were charged with selling—the former, a quantity of oxalic acid, and the latter, a bottle of Dr. J. Collis Browne's chlorodyne, on July 29. The charges were denied, and the cases continued.

A similar course was followed in the case against James Brown, who denied having, on June 15, in his shop, at 229 St. James's Road, sold a quantity of oxalic acid.

The cases will all be tried, on November 23, in the Debts Recovery Court. The proceedings to begin at half-past ten in the forenoon.

PHOSPHORUS IN SCHOOLS.

THIS was an action brought before the Master of the Rolls and Lords Justices Lopes and Kay, in the Court of Appeal, November 7, on behalf of a schoolboy to recover damages for personal injuries sustained by him by reason of the alleged negligence of the defendant, a schoolmaster at Kenley, in Surrey. At the trial the jury found that the defendant had been guilty of negligence, and found for the plaintiff, with

75% damages. The defendant now applied for judgment or for a new trial, on the ground that the learned Judge (Mr. Justice Cave) who had tried the case had misdirected the jury in not telling them that if they were of opinion that the defendant had exercised due caution in looking up the bottle in a cupboard they ought to find in his favour. Mr. Horace Ivory appeared for the defendant, and Mr. Kemp, Q.C., and Mr. English Harrison, for the plaintiff.

Their Lordships dismissed the appeal, with costs, being of opinion that even if the learned Judge had not sufficiently directed the jury, the result of a new trial must inevitably be in favour of the plaintiff.

A PATENT COUGH-MIXTURE.—PATENT REVOKED.

In the Chancery Division on October 23, before Mr. Justice Chitty, Mr. Aston, Q.C., on behalf of the Pharmaceutical Society, applied for the revocation of letters patent No. 20,377 of 1892, which was described as being for an improvement in cough-mixtures.

Mr. Sleight, the patentee, appeared in person, and said he was not financially in a position to oppose the petition.

Mr. Aston said the grounds on which he asked for revocation were: (1) That this was not an invention such as, having regard to public policy, ought to be the subject of letters patent; (2) that the alleged invention upon the face of it, as described, was not subject-matter of a patent; (3) that even if it were subject-matter, it had been clearly anticipated both by public knowledge and by a special instance of prior use; and (4) that if the patentee said there was something new and special in the way in which he compounded the various ingredients, the specification was insufficient.

Mr. Justice Chitty offered to allow the petition to stand over if Mr. Sleight wished to submit any evidence, but Mr. Sleight said he had made up his mind not to oppose the application, and his Lordship therefore made the order for the revocation of the letters patent, allowing costs.

USE OF AERATED-WATER BOTTLES.

THE Dundee Sheriff-Substitute gave his decision on Thursday, November 2, in the action brought by David Nicoll, aerated water manufacturer, Fleuchar Craig, against William Samson, Urquhart Street, Dundee, for interdict to prevent him and his servants from filling with aerated water manufactured by him, or otherwise using any bottles or syphons bearing pursuer's name or trade mark; and for 245% for loss and damage alleged to have been sustained through the wrongous and illegal acts of the defender by the use of pursuer's bottles. Mr. Samson contended that he never deprived Mr. Nicoll of the use of his bottles, as the latter received, or ought to have received, from his various customers bottles originally belonging to himself or to the defender and others in exchange for those sent out by him, in accordance with the usual trade custom. In a counter-action Mr. Samson sued Mr. Nicoll for return of 140 dozen bottles, which he alleged were lent by him to Mr. Nicoll in October 1891, and for 10% in name of damages for the detention. Mr. Nicoll held that a large proportion of the bottles lent to him belonged to himself and bore his trade-mark, and that others belonged to Messrs. G. & P. Barrie, whose bottles he was entitled to fill. In the first action Sheriff Campbell Smith decided in favour of the defender, and allowed expenses.

In the course of his "interlocutor" his Lordship expressed strong views in regard to the proprietorship of aerated water bottles. He said: "The *prima-facie* test of ownership in movable property is actual physical custody and possession. That a man's name should be on a watch, or a gun, or a snuff-box, or an umbrella, or a hat is not conclusive proof that it is his property. It may be a strong element of proof that it was once his, but none that the lawful title to it has not passed to some one else. The pursuer has had made for him many a hundred bottles with his name and his 'swan' or other emblems upon them, and I am ready to believe that they all, or most of them, originally belonged to him. But that is nothing to the purpose when I am convinced by overwhelming proof that he has sold them by the dozen and bartered them away for other bottles like them with other names upon them by hundreds and tens of hundreds. He

has in his possession admittedly 300 dozens of bottles with the defender's name upon them. He got a few of these by purchase from hawkers and brokers, though his subordinates appear to have concealed from him that they were buying bottles whenever they could get them cheap; but I don't doubt he got the most of them by the process of barter, leaving boxes of his own bottles full, and taking in exchange an equal number of equally convenient bottles of whatever kind he could get. Formerly in *Barrie v. Smith*, March 25, 1891, in an action to prosecute a broker selling bottles with Barrie's name upon them, I scouted the idea of every bottle with a name on it being a 'small entailed estate,' and I have not seen a particle of reason to recant what I then wrote."

In the counter-action the Sheriff found that defender was bound to return the bottles he borrowed, or like bottles; and that his failure to return for many months after demand had been wrongful and to the damage of pursuer. His Lordship assessed damages at 5%.

HADIDA v. FORDHAM.—THE PYNKA SYNDICATE CASE—APPEAL PENDING.

MR. JUSTICE ROMER, in the Chancery Division of the High Court, on November 7, had before him an application on behalf of the defendants in this action for a stay of execution pending an appeal. In the action, which was tried before his Lordship on August 1 last, the plaintiffs, who carry on business at Liverpool and in London, asking for an injunction against the defendants, who trade at York Road, London, to restrain them from using the word "Pynka" in such a way as to lead to the belief that the defendants' goods were those of the plaintiffs' syndicate, and, consequently, infringing the plaintiffs' trade-mark.

Mr. A. à B. Terrell appeared for the defendants, and Mr. Waggett for the plaintiffs.

Mr. Terrell said that at the trial the defendants gave an undertaking in the terms of the injunction asked for, and were ordered by the Court to pay the costs of the action. The costs had now been taxed, and the defendants had served a notice of appeal, pending the prosecution of which they now asked that execution should be stayed. The real plaintiffs were the Pynka Syndicate, because it would be remembered that, though both Hadida and the Pynka Syndicate were named as plaintiffs, it was stated in the statement of claim that Hadida's business had been assigned to the Pynka Syndicate. His (Mr. Terrell) affidavit stated that the defendants' solicitor offered to the plaintiffs' solicitor to pay the costs to him on his undertaking to repay them in the event of the appeal being successful. But that was refused. As a consequence, his Lordship was now asked to stay execution on these terms or on the defendants paying the costs into Court.

Mr. Waggett, on behalf of the plaintiffs, opposed the application, on the ground that the appeal was really being brought to delay the payment of costs. He submitted that, in view of the undertaking given by the defendants, the application ought to be refused with costs.

Mr. Terrell said the undertaking was given under pressure.

Mr. Justice Romer said that Mr. Terrell could not be heard to urge that, and that he did not see how the defendants could appeal in the face of their undertaking.

Ultimately his Lordship directed the defendants to pay the costs to the solicitor for the plaintiffs on his undertaking to repay them in the event of the appeal being successful. The costs of the motion were made costs in the appeal.

BUYING MEDICAL TESTIMONIALS.

ON Tuesday an appeal by the official liquidator of Macdonald, Sons & Co. (Limited), from the decision of Mr. Justice Vaughan Williams, was heard before Lords Justices Lindley, Smith, and Davey. The question raised was whether nine medical practitioners should have their respective names removed from the list of contributories in respect of one 25% Founder's share in the company. The medical gentlemen were placed on the list by the official liquidator after the winding up of the company, and they moved before Mr. Justice Vaughan Williams, and were successful, to have their names removed, against the order of the Court below of August 7; the liquidator appealed.

Mr. Cozens Hardy, Q.C., and Mr. Bacon appeared for the liquidator, and M. Warrington for the respondents.

The material facts of the case are as follows: Macdonald, Sons & Co. (limited), manufacturers and vendors of medicated wines and foods, of Finsbury Square, were registered under the Companies Acts on July 15, 1892, and the company was wound up on November 9. The capital was 15,000*l.*, including forty 25*l.* Founders' shares. An agent of the company saw several medical men in London and suggested that they should recommend the company's medicated wines and foods (principally biscuits) to their patients and tradesmen, and nine gentlemen undertook to do so, they to receive by way of consideration one 25*l.* fully-paid-up Founder's share each. The certificates were sent to them, and they retained them until October 13, when they returned them on receipt of a letter from the secretary of the company. The agreement between the company and the medical men was not registered at Somerset House as required by the statute; there was no application for the shares, and there was no entry made by the secretary in the share register. When applied to under the winding up for payment, the nine gentlemen repudiated all liability, and it was contended that if they were in law the holders of the shares at all, it must be that they were holders of fully-paid-up shares, and therefore nothing was due from them. Mr. Justice Vaughan Williams, whilst expressing regret that medical men should have accepted these shares as bribes, held that they were not legally liable to pay for them. If their names appeared on the list of contributors, it must be in respect of fully-paid-up shares on which nothing was due. Hence the appeal.

After hearing the arguments,

Lord Justice Lindley said he did not propose to say anything about the facts disclosed in this case—about the morality or immorality of the conduct which had come to light on the part of the respondents. However much the Court might disapprove of the practice of "puffing" goods of this description on the part of medical men, the Court could not twist facts out of their natural order or draw inferences which could not be properly sustained. The real question was whether these nine medical gentlemen were contributors or not? He came to the conclusion that they were not, and therefore the appeal must be dismissed.

Lords Justices Smith and Davey concurring, the appeal was dismissed with costs.

BEECHAM'S PILLS.

ON Thursday, in the Court of Mr. Justice Kekewich, counsel on behalf of Mr. Thomas Beecham asked his Lordship to grant an injunction restraining Mr. Lindow, a medical man, residing at Plumstead, and also carrying on a chemist's business there under a manager, from selling as "Beecham's" pills not of the manufacture of the plaintiff. Counsel for the defendant said a mistake had been made which he much regretted. His manager, without his knowledge or consent, had sold as "Beecham's" pills not of the plaintiff's make; but he was willing to regard the motion as trial of the action, to submit to a perpetual injunction, and to pay an agreed sum as damages and the costs. This course was adopted.

COUNTY COURT CASES.

A Marmalade Contract.

ON November 4, at the Cuckermouth County Court, John Carswell, jam manufacturer, Kendal, sued Joseph Straughton, chemist, Cuckermouth, for 48*l.* 10*l.*, being damages for alleged breach of contract in non-acceptance of 7 tons 2 cwt. of marmalade, part of a contract of 10 tons, which it was alleged defendant agreed to accept and pay for between January 27 and December 31, 1892. Plaintiff said that on January 13, 1892, he received a letter from defendant to the effect that he would require 8 or 12 tons of marmalade in 7-lb. or 14-lb. tins, to be delivered during the next twelve months. Eight deliveries took place under the contract, the quantity delivered being 2 tons 18 cwt. The fruit was specially bought for a contract of this sort, and it was necessary to convert it into jam and place it in jars, or to reduce it to pulp and store it in casks. He received no

complaints from defendant with regard to the quality of the jam or otherwise. Plaintiff asked defendant personally to complete the contract. On March 23, however, defendant wrote that the shippers to whom he supplied the goods had cancelled the contract. Plaintiff that replied he should hold defendant to the contract. The pulp when made was worth 12*l.* per ton, but now it was almost worthless. Mr. Paisley, solicitor for the defendant, commenced his cross-examination, when the witness fainted and the case had to be adjourned. On his recovery a consultation took place between the solicitors for both parties, with the result that the Registrar announced that the case had been withdrawn.

Not Paid According to Age.

IN the City of London Court on November 3, in the case of Scott v. Attridge, the plaintiffs sought to enforce payment of 6*l.* 5*s.*, due by the defendant, Mr. Attridge, 113 Holborn, E.C., under a judgment of the Court. The plaintiff's witness said the defendant was an assistant to Messrs. Lamplough (Limited), of Holborn, and he was 24 years of age.

Mr. Commissioner Kerr: What have I to do with his age? (Laughter.)

Witness: I submit that a chemist's assistant at 24 years of age would be in receipt of a good salary.

Mr. Commissioner Kerr: Do you, though? I have yet to learn that because a man is 24, or any other age, he must have "a good salary." Go on, sir. You must take out another summons when you have some evidence of his means.

Mr. Davis said he did not like to be harsh enough to subpoena the defendant's employer.

Mr. Commissioner Kerr said that must be done on the next occasion. He would make no order in this case.

Miss Ruppert and the Royal Marriage.

IN the Westminster County Court on Wednesday, in the case of Bradwell v. Ruppert, plaintiff sought to recover 30*l.*, alleged to be due to him under an agreement entered into with the defendant, Madame Anna Ruppert, specialist for the cure of skin-diseases, as percentage of the profits derived from the sale of the seats fixed by the plaintiff in front of the defendant's place of business in Piccadilly on the occasion of the marriage of the Duke of York. The defendant had offered commission on 62*l.* 10*s.*, but the plaintiff declined it on the ground that the profit must have been at least 130*l.* Miss Ruppert emphatically swore that the total profits on the letting of the seats amounted to 62*l.* 10*s.* only. His Honour gave judgment for 14*l.* 6*s.* 10*d.*

The Farmer Chemist and his Manager.

AT the Stratford-on-Avon County Court, on November 6, before Judge Ingham, Arthur Henry Clarke, pharmaceutical chemist, of Henley-in-Arden, sued W. V. Robinson, described as a farmer, living at Ockley, Sussex, claiming 13*l.* 1*s.* 4*d.* for salary, salary in lieu of notice, and expenses of removal. Mr. Grimley (instructed by Mr. A. J. O'Connor, of Birmingham) appeared for the plaintiff, and Mr. Stanley C. Warden for the defendant.

On behalf of the plaintiff it was alleged that the defendant speculated in chemists' businesses. In September, 1892, he purchased a business at Henley-in-Arden, and engaged the plaintiff as manager at a salary of 35*s.* per week. Clarke, who was then residing at Wantage, went to Henley on September 27, and lived in apartments till October 10, when he took possession of the shop and house, and removed his wife and family from Wantage. He alleged that Robinson offered to pay the expenses of their removal. On November 3, 1892, the defendant surprised the plaintiff by appearing in the shop about 8 o'clock in the morning, and asking for the cash and accounts, which were produced and found practically correct. Later in the day Clarke alleged that Robinson summarily dismissed him because he referred two customers to him.

For the defence it was urged that the plaintiff was addicted to drinking, and that on November 3 he was so drunk when the defendant went into the shop that he had to fetch a Mr. Johnson, a former owner of the business, to serve customers.

Several witnesses were also called, showing that on November 3 the plaintiff actually refused to serve customers,

and was in such a wild and excited state, having threatened the defendant with a carving-knife, that a policeman had to be called in.

Supporting his contention that the dismissal was not a *bonâ-fide* one, Mr. Grimley pointed out that Robinson was continually complaining that the stock was not so valuable as the vendor had represented; got rid of the business directly Clarke went; and had even said that out of nine managers he had engaged eight were drunkards and scamps.

After a protracted hearing, his Honour gave judgment for the plaintiff for 3*l.* 15*s.* 4*d.*, disallowing the expenses of removal and the salary in lieu of notice.

The Perfumer and her Sins.

IN the City of London Court, on Wednesday, before Mr. Registrar Wild, the case of *Bush v. Thumwood* was disposed of. The action which has already been reported in THE CHEMIST AND DRUGGIST, was brought by Messrs. W. J. Bush & Co., perfume-manufacturers, of Artillery Lane, Bishopsgate, E.C., and they claimed to recover the sum of 3*l.* 4*s.* 4*d.* for perfumes and essences supplied to the defendant, Mrs. Harriet Thumwood, perfumer, formerly of Clapham Road, and now of London Road, St. Leonards-on-Sea.

When the case was last before the Court, the plaintiffs' representative stated that the goods which were the subject matter of the action were supplied to the defendant's son, under a guarantee given to the defendant in 1888. It seemed that the defendant's son was formerly the manager of the defendant's business, but that she had on a subsequent occasion sold her interest in it to him. Mr. Commissioner Kerr, before whom the matter then came, suggested that the defendant's son should be added as a co-defendant. Counsel for the defendant pointed out that the defendant's son was dead. Mr. Commissioner Kerr then adjourned the hearing for the plaintiffs to give strict evidence of the goods having been supplied to the defendant herself or upon her authority. On Wednesday Mr. Registrar Wild was satisfied with the evidence which the plaintiffs gave, although the defendant still contended that she had not received some of the goods for which she had been sued. Mr. Registrar Wild found for the plaintiffs, for the amount claimed, with costs.

Value of a Dentist's Time.

IN the Westminster County Court on November 2, in the case of *Bromley v. Jerrard*, the plaintiff, a dentist of St. Martin's Lane, sued the defendant, who is a domestic servant, to recover a balance of account in respect of a set of false teeth. The plaintiff said he agreed to make the defendant a set of teeth for 5*l.* 10*s.*, and they were to be paid for by monthly instalments of 1*l.* each. Four such instalments had been paid, and there was now due a balance of 30*s.* The defendant said she was earning 1*l.* a month, the whole of which she agreed to pay to the plaintiff until the teeth were paid for. The reason she had not paid the balance was because the teeth were absolutely useless to her, and were constantly breaking. They fitted badly and gave her pain.

The Judge: The charge of 5*l.* 10*s.* sounds a high price for a person like the defendant.

Plaintiff: It is a very moderate charge for goods of the class, and the teeth would have been perfectly satisfactory had it not been for the careless manner in which they had been treated. They have cost an immense amount of time, which I value at 30*s.*

The Judge: What is your estimate of the value of your time as a dentist?

Plaintiff: I consider the value of my time to be a guinea an hour. (Laughter.)

His Honour: Well, there does not appear to be any defence to the claim, therefore you must have a verdict, but I shall make an order for payment of the money by monthly instalments of 2*s.* each, as the defendant is in a very humble position in life.

Plaintiff: May I ask for my costs?

His Honour (indignantly): Certainly not. What do you ask for?—a guinea an hour for all the time you have been in court to-day?

ANTIDOTE FOR CARBOLIC ACID.—Strong solution of sulphate of soda forms with carbolic acid a harmless mixture, and has been used in a case of carbolic-acid poisoning successfully.

DEATHS

BAXTER.—On November 5, at his residence, 67 Lower Baggot Street, Patrick C. Baxter, F.R.C.S.I., L.A.H. Aged 55. Dr. Baxter was proprietor of a Medical Hall in Lower Baggot Street, Dublin, some years ago, and has acted for many years as one of the governors of the Apothecaries' Hall, Dublin.

BELL.—On September 30, John Bell, chemist and druggist, formerly of Scotch Street, Carlisle, but for the past thirty years assistant to Mr. Andrew Thompson, pharmaceutical chemist, Carlisle.

BOORNE.—On November 2, at his residence Dalston House, Apsley Road, Clifton, Charles Boorne, pharmaceutical chemist (late of the firm of Ferris & Company, Bristol). Aged 66 years.

BROWN.—On Sunday, November 5, William Valentine Brown, suddenly, of heart-disease at Halton View, Widnes. Aged 24. The deceased was engaged as chief chemist at Bolton's Copperworks.

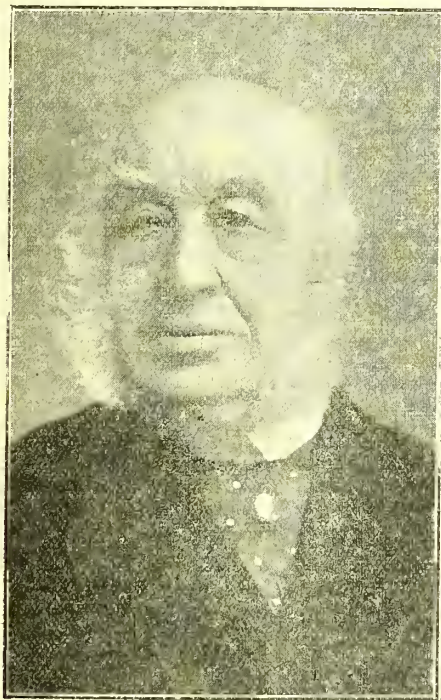
CARR.—On Saturday evening, October 23, Edward Carr, chemist and druggist, at his residence, Bridge Street, Fakenham, Norfolk. Aged 65 years. The deceased gentleman had for many years carried on a successful business as chemist and druggist, and was highly respected by a large number of friends. He leaves a widow.

CLARK.—On Monday afternoon, November 6, Sir Andrew Clark, Bart., M.D., the famous physician and President of the Royal College of Surgeons, died at his residence in Cavendish Square, W. His death was not unexpected. On October 19 Sir Andrew was struck down with an attack of hæmorrhage of the brain, and although the paralysis supervening abated somewhat, the condition was never such as to permit the patient's removal from the consulting-room where he was attacked, and there he died. The deceased baronet had attained a position in the medical profession which few have ever attained, and those who know him say that this was due to a rare combination of professional ability and personal tact and pleasantness. He was born in Aberdeenshire, sixty-seven years ago, and in due course commenced the study of medicine at the Aberdeen University. There he graduated, and supplemented his training by a course of study at the Edinburgh Medical school. His next step was to Haslar, where he acted as curator of the museum, and in 1854 he came to London and set up as a consulting-physician. The hospital to which he was specially attached was the London Hospital. He had been President of the Royal College of Physicians since 1883, and was at his death also President of the Medico-Chirurgical Society. He received a baronetcy in 1883, and had more years been in store for him, higher honours would doubtless have been conferred upon him. He was the physician and devoted friend of Mr. Gladstone, and his death has caused widespread regret.



MAY.—Mr. John May, of the firm of May & Baker (Limited), of Garden Wharf, Battersea, died on November 7 from an attack of pneumonia, after having been ailing for some time with heart-affection. John May was born at Ipswich in 1808, and after attending a private school, was apprenticed to Mr. Hooker, a local chemist and druggist. He remained with Mr. Hooker until 1830, when he made his home in London, and attended Professor Jonathan Pereira's lectures on materia medica. After a while young May found a situation with Mr. Chas. John Price, a manufacturing chemist of Battersea. Here he obtained his first acquaintance with the wholesale manufacture of mercurials and other chemicals, with which his name afterwards became so closely associated. Mr. Price's firm, now long extinct, being at that time the chief manufacturing house in sulphate of magnesia, mercury preparations, &c., in the South of England. In 1834 Mr. May started business on his own

account as a chemical-manufacturer, in partnership with Messrs. Pickett & Grimwade, both of whom had been apprentices at Mr. Hooper's in Ipswich at the period of Mr. May's own initiation in the trade. The firm commenced business in what was then the outlying swamp of Battersea, upon the same site now occupied by the works of May & Baker (Limited). That partnership did not last long. Mr. Pickett died within a year of the commencement of the firm, and Mr. Grimwade (who had been an assistant with the famous Jacob Bell, of Oxford Street) forsook chemistry in 1839, when he purchased Sheepcote Farm at the foot of Harrow Hill, where he lived for the rest of his life. This Mr. Grimwade was a cousin of the late head of the firm of Grimwade, Ridley, & Co., well known in the export drug trade. He was the first man to commence the business in "desiccated milk" in vacuo in this country, and was joined by Mr. May in a company which he established for the manufacture and sale of that article. Desiccated milk proved an excellent business venture for Mr. May and his partner, Mr. Baker, until the time when Swiss condensed milk appeared in the trade, and drove the older article out of the field. Upon the retirement of Mr. Grimwade in 1839, Mr. W. G. Baker, now the senior director of the company, was taken



another day the south, another the west, and so on. In the early days, when Mr. May returned in the evening from his journeyings, the partners would have tea, and then regularly settle themselves to work at the books—invoicing, correspondence, &c.—till 10 o'clock. If business had been good Mr. May would, as likely as not, have forgotten all about his dinner. "Bless me," he would remark, as the tea came in, "I don't think I have had any dinner yet." That was the way in which businesses were built up fifty years ago. In 1891 Mr. May, after a withdrawal from active business life extending over fifteen years, joined the new limited company as a member of the board of directors, and from that time until the time of his death attended regularly to his business duties. Mr. May lived within a few minutes' walk of the factory, in one of the few remaining old-fashioned houses of Battersea, which he had bought in the early days of the partnership, and which proved a very excellent investment. His funeral will take place on November 9 at Plymouth, where the deceased had expressed a wish to be buried in the same grave which holds the remains of a favourite niece of his, who died some years ago.

Mr. Thomas Tyrer writes us some personal reminiscences of the late Mr. May. He says:—"In 1862, after leaving the old Royal College of Chemistry, where Dr. A. W. Hofmann was Professor, I began the search for a situation, and after many wearying enquiries I called at Garden Wharf. I saw Mr. John May, whose hair was then already as white as it was 25 years later. After a severe cross-examination, during which I saw evidences of his character which were fully borne out afterwards, I was engaged. Mr. May was always very severe upon unveracity, and anything indefinite and slipshod was to him a cause of great irritation. To his counsels and influence I owe any business habits I possess, and I considered it the crowning reward of my life when, on his retirement in 1876, he stipulated that I should be made a partner in the firm. It was often his habit in the earlier years to ask me to come from my lodgings after dinner and spend the fine summer evenings on the Wharf overlooking the Thames and opposite the old 'Cremorne,' from which Turnerian views of the sunset were obtained. His immediate relatives were the recipients of his warmest solicitude. Yet he preferred a loneliness which seemed painful to me. He was as unobtrusive in his religious and political views as in his life; and loved the 'old order' of things, and disliked much of the new. He was eminently a man of wise caution, a hater of deceit, and a lover of truth, whether he agreed with the speaker or not. Mr. May was equally unobtrusive in his benevolence, and I have been honoured by being his almoner on many occasions, with the strict injunction never to divulge his name as benefactor. Although our interests—he became a director of the company three years ago—were not identical, no difference on this account was observable between us when I called upon him, which I regularly did once a month. On these occasions he chatted about old times and the men he had known, and he exhibited genuine pleasure at hearing of the successes of men who were young when he knew them. This interest was never exhibited more than when I saw him last Thursday fortnight."

PEARCE.—At Deal, last week, Mr. Edward Raikes Pearce, who for nearly fifty years had carried on business as a dentist in London Street, Greenwich. Aged 70 years. Mr. Pearce took great interest in the study of geology and natural history, and was a respected member of several local societies.

RHODES.—On Wednesday, November 1, Mr. T. B. Rhodes, chemist and druggist, of Cherry Orchard Road, Croydon. St. James' Road, and North End, Croydon. For several months past the deceased gentleman has been suffering from cancer, for which he had undergone operations in the Croydon General Hospital. Mr. Rhodes will be much missed in the locality, especially among the poor, to whom he was a good friend. He was one of the oldest inhabitants of Croydon.

SHAW.—At Stalybridge, Mr. W. H. Shaw, chemist and dyer. The deceased gentleman was apprenticed to Mr. Richard Needham, chemist and druggist, and started business for himself at an early age. He was a prominent Freemason, and was at the time of his death W.M. of the "Moira" Lodge.

into the partnership, which then became May & Baker. For thirty-seven years the two partners worked together in harmony, the business gradually extending under their care, until it became one of the largest factories of medicinal chemicals in the country. In the early days of the firm they had purchased for 200*l.* a freehold plot of land at Battersea, formerly part of a garden on Lord Bolingbroke's estate. Hence the works received the name of Garden Wharf. Ever since that time the firm has occupied the same plot of ground, although, of course, as its trade extended, the boundaries of the original freehold disappeared under the overlapping buildings of the firm. In 1876 Mr. May retired from the firm in favour of Mr. R. C. Heath (the chairman of the present company) and Mr. Thomas Tyrer, who had for fourteen years been in the employ of the firm. Two years afterwards Mr. W. E. B. Blenkinsop, Mr. Heath's stepson, also entered the partnership. From the time when Mr. May started his business until his severance from active participation in the firm in 1876, he paid his weekly calls personally on the recognised London wholesale drug-houses. He always walked, and covered long distances. One day's journey was from Battersea to Bethnal Green, including a number of calls on the way;

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Editorial Comments.

CHEMISTS AND MEDICINE-STAMP
LICENCES.

THE Pharmaceutical Council have given effective reasons for not advocating a repeal or amendment of the Medicine-Stamp Acts in the directions suggested by their memorialists from Edinburgh and Nottingham; but they need not have stood on their dignity quite so firmly. Mr. Carteighe says the Nottingham memorialists referred to an invitation from the Board of Inland Revenue to the Pharmaceutical Society to a conference. He is not aware of any such invitation and supposes the reference may have been to the interview which the Trade Association had with the Board some years ago. Chemists who read their journals knew perfectly well what the Nottingham people were alluding to. In the communication which Mr. Wright, M.P., sent to the Chairman of the Nottingham Chemists' Association, and which we published on July 22 last, he stated that the present chairman of the Board was "most willing to consider the question with any body, or bodies, having the authority to speak in the

name of the chemists of Great Britain." That was an invitation to the Pharmaceutical Society, though it was not a formal one, and we cannot help regretting it has not been accepted. We have frequently pointed out that the suggestions put forward from time to time by chemists, when they are feeling sore after paying a penalty, are not such as would commend themselves to reasonable men in cooler moments; but we have never considered that the Medicine-stamp Acts are so perfect that they cannot be improved. Moreover, there is reason to expect that some modification of the Acts will be drafted by the Board of Inland Revenue themselves, and it is particularly desirable that a representative body of chemists should have the opportunity of commenting on official ideas before these are crystallised into perhaps pet clauses. We may also point out that the Council was unnecessarily modest in regard to the proportion of chemists to licensed medicine-vendors generally. Mr. Carraighe stated that chemists are only one-fifth of the total. As a matter of fact, they are nearly, if not quite, one-third. The number of medicine-licences issued last year numbered 29,358. According to the Census there were 8,636 persons in business on their own account in 1891 in England and Wales. Add 1,000 for Scotland, and remember that a good number of the whole take out more than one licence, and deduct a small percentage for partners, and the merest fraction, if any, for chemists who do not take a medicine-licence, and we get a fair third of the total. We cannot deny that a very considerable section of the trade has got into outside hands, but we have established that chemists and druggists are a much more important factor in the business than our representatives have carelessly assumed.

GERMAN CHEMICAL DIVIDENDS.

THE Secretary of the German Society for the Protection of the Interests of Chemical Industry, a body to which practically the whole of the important chemical-factories belong, issues annually an interesting report on the condition of the chemical industry in the German Empire, which is presented to the Society at its annual meeting. From the point of view of statistical detail the report is more valuable and complete than any other publication of the kind of which we know. Not the least interesting part of the information contained in it applies to the profits of the joint-stock factories which are members of the Society, for it is from that part of the report that we are able to form the most authoritative opinion of the progress of chemical industry in Germany. According to the last report, which has recently been published by the Secretary of the "Verein," the average of the dividends declared by the aggregate of the German chemical joint-stock works during the last eleven years has been as follows:—

Year ..	1882	1883	1884	1885	1886	1887
Per cent.	12.82	10.02	7.26	6.37	7.17	8.92
Year ..	1888	1889	1890	1891	1892	
Per cent.	9.78	10.53	12.81	11.29	11.92	

It is interesting to observe how gradually, and how steadily, the process of recuperation has proceeded since the unfavourable year 1885. During the last two years the profits have again been wavering, and the figures for 1893 will probably show a considerable decline, for, by all accounts, Germany has been suffering a trade depression quite as severe as any other country in Europe. The joint-stock companies from whose dividends the averages here recorded have been drawn number 89, and an analysis of the proportions of the percentage-dividends of these 89 works removes, to a large extent, the gilt which, from the first series of figures given above, appears to be laid pretty thickly upon

the gingerbread of the profits. The second series of figures divides the 89 works into groups, according to the dividends which they have declared last year:—

Dividend Per Cent.	None	Under 2½	2½ to 5	5 to 7½	7½ to 10	10 to 15	Over 15
Number of factories ..	23	1	10	12	19	11	13
Percentage of total ..	25.84	1.12	11.24	13.48	21.35	12.36	14.61

These figures show that over one-fourth of the works made no profit at all, and that nearly two-fifths returned their owners less than the orthodox 5 per cent. It is true that 14.61 per cent. of the factories made a dividend of over 15 per cent., but it would be as illogical to argue from these facts that German chemical industry as a whole is in a prosperous condition as it would be to take an optimist view of the chemical industry in this country merely because one large chemical-works has this year declared a dividend of 100 per cent., an achievement probably unique in the records of the industry of any other country in 1893. British manufacturers and merchants should note that the bulk of the factories declaring very high dividends are coal-tar dye and synthetic remedy works, representing an industry which, though now firmly embedded into German soil, was originally a distinctively British one, but was deliberately thrown away and neglected by us in the years of commercial fatness which now seem to have gone for good.

Looking specially at factories devoted to the preparation of pharmaceutical, photographic, and chemico-technical preparations, we find that the dividends earned in this branch alone are of a considerably higher average than those of the entire chemical industry. The average returns of the branch in question alone were:—

Year ..	1834	1835	1836	1887	1883
Per cent.	11.21	12.5	13.44	15.84	11.86
Year ..	1889	1890	1891	1892	
Per cent.	11.80	12.43	8.73	12.60	

or an average for the last five years of 12.27 per cent., compared with one of 9.57 per cent. for the entire industry. Judging by the two sets of figures, the special branch is liable to much stronger fluctuations than the entire industry, and its curves of prosperity or adversity do not necessarily correspond with those of the chemical-trade as a whole. Summarising the position of the German chemical industry from the figures before us, we should say that its immediate prospects are by no means bright. The apparent revival of prosperity in 1892 was largely due to the sudden demand for disinfectants and medicinal chemicals, but upon the whole the dividend portents point downwards. Such circumstances as the financial crises in North and South America and in Australia, the partial paralysis of business in England and on many parts of the Continent, and the tariff-war with Russia must reduce earnings. Fortunately for Germany, the chief chemical-factories in that country had already established branch factories in Russia some years ago, and a great part of the extra profits made by these branches owing to the cessation of German imports will, therefore, ultimately find its way into German pockets all the same. It is true that the 89 factories which furnish the basis for the figures here dealt with do not comprise any private firms, which are, of course, much more numerous than joint-stock concerns; but so far as importance of turnover is concerned, the 89 companies probably equal and possibly surpass largely, the output of all the private firms put together.

ADULTERATION IN 1892.

THE Local Government Board finds it necessary to fill over 700 pages to report its good deeds during the past year. It is true that this department has a very varied assortment of duties to fulfil, but it cannot be denied that some of its officers are inclined to be a little garrulous. For the moment we are dealing only with the section which records the Board's report on the working of the Sale of Food and Drugs Act, which is contained within some twenty-eight pages of the report. In an elaborate set of tables a detailed conspectus of all the analyses made under this Act is given. It probably costs the nation something in hundreds of pounds to collate and print all this stuff, and as we have remarked year after year, the result is absolutely worthless. To pick out a couple of lines at random—for instance, we find it stated that the Bristol analyst analysed 350 samples, and found 23 of them adulterated; the Gloucester official tested 26 samples and condemned 9 of them. The most stolid of Whitehall mathematicians even will hardly assume from these figures that adulteration is five times as prevalent in Gloucester as it is at Bristol, which is what the statistics establish if they establish anything. It may simply mean that at Gloucester samples were taken with a little more discretion than at Bristol, but as a matter of fact no conclusion of any sort can be drawn from statistics compiled on no fixed basis whatever. And yet the Board itself has the audacity year by year to draw up a total summary of all these figures and present averages expressly for the purpose—at least, we can imagine no other—of misleading the simple gentlemen who write editorial articles for the daily papers. From this it appears that, while in 1891 adulteration was discovered in 12.2 per cent. of the articles examined, the percentage in 1892 had risen to 12.4. The absurdity of such estimates is disclosed when the constituents of the table are looked at. It appears that morality in the jam-trade rose tremendously in 1892, the percentage adulteration having dropped from 2.7 to 0.6. In beer, on the other hand, it went up from 4.1 to 16.8, and in drugs from 16.4 to 20.1. Moreover, it must be remembered that the articles said to have been adulterated are not those which have been proved to have been so; they are only those which the analyst says were impure. Even the innocent Board reporter is smart enough to see that his statistics are a little shaky in this respect, for he comments on the drug section as follows:—

The extent of the disproportion between the number of samples of drugs reported against, and those in respect of which proceedings were successfully taken, suggests that the substantial adulteration of drugs may possibly be more rare than the percentage in the table would seem to indicate. Of the 141 samples condemned only 44 were the subject of prosecutions, and in just half of these cases fines were imposed, amounting in the aggregate to 26*l.* 0*s.* 6*d.* Only one fine was as high as 5*l.*

Milk still accounts for nearly half of the work done by the analysts. There is no evidence, though the Board man tries hard to discover some, whether the dilution of milk with water is being checked. In regard to butter we are told that mixture with margarine is more general, and is more scientifically accomplished. The art of incorporating as much water as possible with butter is still a form of skill which pays, and the explanation given in one case recorded by Mr. A. H. Allen, that it was in consequence of the exceptional quantity of dew on the grass which the cows had fed on, was ingenious enough to almost deserve an acquittal. The practice of combining chicory with coffee is too firmly established, in the opinion of the Board, to be eradicated, but it is to be desired that there should be some-

thing more like uniformity in the opinion of the magistrates, as to the elasticity of the term "mixture" on a label. When the proportion of chicory is liable to ascend even to 97 per cent., there should be an understanding how much the simple explanation "This is a mixture" is capable of covering. Sugar is too cheap to be worth adulteration to any extent, but the addition of a dye to beet sugar to make it look like Demerara is not always done discreetly. The Cheshire analyst reports an instance in which sugar used to sweeten oranges developed a rich blue colour, due to the use of Nicholson's blue. Lardine, which is made from beef fat or from the hard fat which remains when oleomargarine has been pressed out of beef fat, and is softened down with cotton-seed oil, and mixed with a varying proportion of true lard, has a tendency to drop the final letters of its designation. Salicylic acid and logwood have been detected in British raspberry-wine. One analyst found 70 samples of beer to have been adulterated with salt, while all the other analysts in the country returned only 10 samples as adulterated. The undue dilution of spirits with water continues, and magistrates cannot be persuaded to regard this conduct as a serious offence. The Board does not know what to say about vinegar, but reports that there "seems to be some uncertainty" whether it ought always to be regarded as spurious if made from anything except malt. Sugar and starch have been found in cocoa and chocolate in unreasonable proportion, copper in tinned peas, lead and sewage contamination in aerated waters, cotton-seed oil in olive, and paraffin in wax. The St. Luke's analyst has made some experiments on cheap ices, and finds them consist of frozen water, sugar, and starch, or milk. Lemon-juice occurs occasionally. Cream is not traceable. All that he examined were sound and healthy, and none contained lead or other metal. He thinks the cases of illness sometimes reported probably arise from the check to the digestion rather than to injurious constituents.

Taken altogether, the report for the year discloses nothing alarming, though we must add that the system adopted by the Board would not be likely to indicate it if there were any such condition.

ARTIFICIAL v. NATURAL INDIGO.

A few months ago we reported that a German firm of dye-makers had succeeded in solving the artificial-indigo problem. They produce what is called indigo-salt, which substantially is latent indigo, and in the dyeing-vat and on the fabric this is developed into indigo-blue. We now learn from Mr. Levinstein's remarks at Manchester last Friday that the process is a success, and that the days of natural indigo are numbered. What this exactly means at present no one can tell. The natural-indigo industry gives employment to many thousands of our Indian subjects, 4,000,000*l.* worth of the dye is produced annually in India, and the indigo-dyeing industry is chiefly an English one. The peculiar manner in which the indigo-plant is cultivated almost ensures that little distress would follow its total suppression; the displacement of the old dye will be gradual, and planters will have time to replace indigo with some product of equal value to them. The question, therefore, comes nearer home, and it is our dyers and chemists who will be most affected by the introduction of the artificial dye. On the one hand old rule-of-thumb methods must give place to scientific exactitude, and on the other, this country must for a time go to Germany for a dye which her chemists have made possible, for practically all the work in regard to the production of artificial indigo has been done in Germany. We need not deplore this fact in face of the growing value of our chemical exports, but it is

a pity that we have not earlier in the day done something to conserve an industry which is peculiarly English—as indigo-dyeing undoubtedly is.

NON-POISONOUS CHLORODYNE.

A person in Leeds who describes himself as a "wholesale manufacturing chemist" is circularising grocers and others with the object of selling through them his "non-poisonous chlorodyne." This "wholesale manufacturing chemist" is not on the register. He has of course no right to the description he has adopted. Whether the sale of an article with the title "chlorodyne," but with the principal constituents omitted, can be legal is a question we should like to see decided. In view of some of the paregoric decisions it is at least questionable.

SCIENTIFIC CRITICISM IN ST. LUKE'S.

The Vestry of St. Luke's has passed a vote of confidence in the chemists at Somerset House as a Board of Reference in regard to analyses under the Sale of Food and Drugs Act. We are not aware whether the learned members of this Vestry have any special grievance, or what has incited this ridiculous resolution. A chemist member of the Vestry, who seconded the motion, being challenged, is reported to have said "he believed" that the decisions of the Somerset House analysts were frequently overturned. He had gathered that, we are sorry to learn, from the journals of the trade. The Act does not make the certificate of the Somerset House chemists necessarily final, but we should like to be referred to any case where a Court has taken upon itself to overturn their decision. Analysts whose certificates have been—to put it mildly—corrected by the Inland Revenue chemists have not always accepted the rebuke in a docile spirit, it is true, but we doubt whether the St. Luke's Vestry is qualified to decide in such controversies. Traders who have been protected by the Somerset House Laboratory from the vagaries of ambitious but unfinished analysts have the utmost confidence in it as a Board of Reference, and their opinion is based on better foundations than any which St. Luke's Vestry can quote.

PATENTING MEDICINES.

We are glad to see that the Pharmaceutical Society have not allowed themselves to be out-manoeuvred by medicine makers who may have thought to get round the Pharmacy Act by the simple process of patenting a formula. They have dropped on a cough mixture for which letters patent were granted last year, and have shown several good reasons why the letters patent should be revoked. The patentee did not oppose, and the Court granted the application.

THE EXPORTATION OF MEDICINAL TINCTURES AND PERFUMERY.

THE following general orders have been issued by the Inland Revenue authorities:—

USE OF "STANDARDS" FOR TESTING CAPACITY OF BOTTLES OF PERFUMED SPIRITS EXPORTED.

(General Order No. 20.)

The Board sanction the use of the following system of determining by means of "standards" the capacity of bottles used for the exportation of perfumed spirits on drawback:—

The trader should furnish the officer with a standard bottle for each size to be filled. This bottle is to be carefully filled as for corking, measured to the thousandth part of a gallon, labelled with the exact content, and then treated as the "standard" for all bottles of the same size and description.

When lots or "lines" of bottles of the same size are ready for packing, the officer should select as many as he considers requisite, not less than six, and compare each with the "standard," and if there is no apparent disparity (subject to

measurement as stated below) he should count the bottles and multiply the number by the capacity of the "standard," so as to get the bulk gallons of the whole lot.

If after an examination by the eye of not less than six bottles, and the selection of one that appears to be of the smallest internal capacity, the contents of such selected bottle be found to be not less than that of the "Standard," the bottles of that size may be passed as of the same content as the "Standard"; but if the content be less than that of the "Standard," the usual measurement of not less than six bottles if there be thirty-six or more of the same size, or one in six if there be less than thirty-six, be carried out in terms of the present regulations on the subject.

The standard bottle is to be kept under Revenue lock in a secure place on the premises of the trader.

Dated October 25, 1893.

EXPORTATION OF TINCTURES. (General Order No. 21.)

With reference to the regulations governing the exportation of tinctures on drawback, as contained in paragraphs 440 to 471 of the licence and cautionary instructions, the Board direct that the following extension of the regulations be allowed:—

Tinctures may be exported by weight in bottles containing $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., 1 lb., 2 lbs., 4 lbs. exact net weight of tincture, and vessels of larger size than is at present sanctioned may be used—subject to the conditions mentioned below namely:—

1. That the bottles in each package be of the same size or the contents of the same net weight, and that no single package be filled with bottles of which the contents are partly calculated by weight and partly by measure.
2. That the form 111-4 be filled up as at present, but that when the tinctures in a case are estimated by weight, the title, "No. of lbs. in the gallon," be substituted for "Number of bottles to the gallon," and that in place of the column, "whether prepared from proof or rectified spirit," columns be substituted showing (1) number of bottles and (2) weight in each bottle of each tincture.
3. That, as at present, the bulk gallons, strength, and proof quantity be entered by the trader in relation to each kind of tincture.
4. That the column for laboratory use be divided so as to show the bulk quantity in the sample as well as the strength.
5. That in all other respects the existing regulations be observed.
6. That no less quantity than 2 bulk gallons be exported in any case or package, and that any package larger than half a gallon or 4 lbs., respectively, shall contain not less than 1 gallon, 2 gallons, &c., or 8 lbs., 16 lbs., &c.

Dated October 31, 1893.

FARMERS AS CHEMISTS.—Even the fertility of suggestion which recommended the British farmer to seek salvation in jam-making did not venture to hint that he might also mend his broken fortunes by compounding drugs. That odd notion of possible rescue has been, it appears, evolved by the farmer himself, from his inner consciousness. This interesting revelation came out the other day at Stratford-on-Avon, during the hearing of a case in which a qualified chemist, who had sole charge of a shop, sued his employer for arrears of salary. And who was the employer? A Sussex farmer, who added speculation in chemists' businesses to his agricultural operations. The only part he ever took in the management of these concerns was to visit them occasionally for the purpose of overhauling the accounts. All the other responsibility devolved on the qualified assistants in charge, and the customers had, therefore, some guarantee that they would not be inadvertently poisoned. But, as the proprietor's sole interest lay in profit-making, he naturally endeavoured to obtain the men he wanted on the cheapest possible terms. Nor did he fail. Qualified chemists must be a drug in the market, or he would not have been able to get any number at a weekly wage of 35s. Whether the article thus secured was of prime quality may be, however, somewhat doubtful. The farmer himself stated that out of nine managers who had served him at the shop in question, eight were drunkards and scamps. In that case, the supposed guarantee for public safety must have been occasionally of the weakest.—*Globe*.

Pharmaceutical Society of Ireland.

THE Council met on November 1 at 67 Lower Mount Street, Dublin. Present: the President (Mr. William Hayes) in the chair, the Vice-President (Mr. Beggs), Messrs. J. J. Bernard, Grindley, Conyngham, Dr. Burnes, Simpson, C. Evans, Merrin, and Professor Tichborne.

REPORT OF LEGAL CASES.

In reference to some correspondence about reports of prosecutions by the Society, Mr. BERNARD moved that notifications of such prosecutions should be sent to the Dublin daily newspapers. Their reports of such cases would have a valuable effect in deterring persons from infringing the provisions of the Acts. Also notifications of prosecutions about to take place in provincial courts should be sent to the local papers.

It was ordered that this should be done.

TOO LATE.

Mr. T. W. Priestly wrote asking why the Council had refused to register him as a druggist.

The PRESIDENT: He applied for registration a little time ago, but we could not grant it.

Mr. GRINDLEY: Because he had allowed the time to pass.

The PRESIDENT: We should have to get a special Act of Parliament to be able to register him.

The REGISTRAR: All the information we can give him is in the Calendar.

STIRRING THE EMBERS.

A letter was read from Mr. G. Lane McCormack pointing out that at the October meeting of the Council an irregularity had been committed by the President in asking a member of the Council to take the chair whilst the Vice-President was present. The letter also deprecated the personalities that had taken place on the occasion of debates in the Council.

The PRESIDENT: I regret that some member of the Council did not draw my attention to the matter at the time. It was entirely an oversight on my part, and I explained that to the Vice-President, Mr. Beggs, and told him that I regretted the incident. Of course it would have been the right thing that he should have taken the chair at the time. I hope Mr. Beggs has forgotten the incident?

The VICE-PRESIDENT: Perfectly, Mr. Chairman. I may also mention that I knew nothing whatever of that letter. I have not seen Mr. McCormack since the meeting.

Mr. GRINDLEY said it appeared that Mr. McCormack's attention was led to the matter by the report of the proceedings in THE CHEMIST AND DRUGGIST. If the minutes of the last meeting had contained any reference to the circumstance—which they did not—he (Mr. Grindley) would have referred to it, because the recurrence of such a thing might lead to unpleasantness.

Mr. CHARLES EVANS: A full explanation was given on the last day, and I don't think there is occasion for further reference to the matter.

In reply to Mr. Grindley, the REGISTRAR said the letter was acknowledged, and it was now marked "read."

THE SCHOOL.

A report of the School Committee recommended that the Council should sanction an arrangement by which a rent of 12l. a year was in future to be paid by the committee to the Society for the use of rooms with gas for the school, the working-expenses of the school to be borne by the committee.

Professor TICHBORNE said there had been a feeling of dissatisfaction on the part of the Treasurer and others in regard to the question of rent. The arrangement recommended was a satisfactory one, and was agreeable to the Professors; for, though they might lose by it in the first year, they had sufficient confidence in the school to believe that their position would be otherwise in a year or two.

Mr. BERNARD: Am I to understand that before you create the new tenancy all the other liabilities of the school are to be cleared off?

The PRESIDENT: Yes.

Mr. BERNARD said that now that the school had grown, as had been said, from a baby to a boy in knickerbockers, any arrears that existed ought to be paid up, and not wiped out.

The PRESIDENT: We have a balance to be allocated to-day.

Mr. BERNARD: Has the Society been receiving the 12l. a head for each pupil in the school?

The PRESIDENT: Yes.

Professor TICHBORNE: There are no arrears. The arrangement now proposed has no relation to the past, but is prospective.

The report was adopted.

Dr. BURNES said he thought the time had arrived when the newly-granted certificates should be presented to the licentiates at an annual evening meeting, in the presence of their friends.

The VICE-PRESIDENT: Would the men who pass in April be satisfied to wait for their licences until October?

Professor TICHBORNE said he did not think Dr. Burnes's proposal would be satisfactory to the students.

The PRESIDENT: It would cause great dissatisfaction. They would not be satisfied to wait.

Mr. GRINDLEY: Does such a practice exist in any society akin to us? Would it not be putting ourselves above the Colleges of Physicians and Surgeons?

The next business was

THE RE-ELECTION OF EXAMINERS.

Mr. CONYNTHAM said he was strongly in favour of doing away with the Preliminary examination altogether, and substituting for it some examination recognised by the Medical Council, which would not only admit the applicants to the position of pharmaceutical students, but would also suffice if the person wanted to become a surgeon or an apothecary.

The VICE-PRESIDENT: The Council have passed a resolution that there shall in future be two examiners for the Preliminary examination.

Mr. GRINDLEY: The Society would be very foolish if they were to give away their privilege of examining their members in arts as well as in the other subjects. As a matter of fact we recognise any other examination that is tantamount to our Preliminary one.

Mr. CONYNTHAM: But these other boards won't recognise ours.

Mr. GRINDLEY: We have nothing to do with that.

Mr. CONYNTHAM: I had a conversation with Dr. Duffey, who told me that the College of Surgeons would be very glad to do away with their Preliminary examination and have a General Board examination substituted for it.

The PRESIDENT said that Dr. Duffey had year after year urged upon the Council the necessity for a second Preliminary examiner, and they had adopted his suggestion. The question was, When was that resolution to come into operation? Their present examiner had two years to serve before another would be appointed, and it would be hardly fair now to reduce his fees by one-half.

Mr. GRINDLEY said he thought the feeling of those who got the resolution passed in favour of the second Preliminary examiner was that their present examiner would have to put up with a certain amount of loss.

The PRESIDENT said it might be better to leave the appointment of the second Preliminary examiner over until next year.

Dr. BURNES said the Preliminary examinations were now very carefully conducted, an hour being given to each subject.

On the motion of the VICE-PRESIDENT, seconded by Mr. GRINDLEY, the three examiners for the Licence were re-elected, and

On the motion of Mr. CONYNTHAM, seconded by Mr. EVANS, Dr. Cosgrave was re-elected Preliminary examiner.

A BOTANY AND MATERIA MEDICA CURRICULUM.

Dr. BURNES moved the following resolution:—

That on and after July 1, 1894, every candidate for the Pharmaceutical Licence examination shall be required to present, in addition to the other certificates hitherto required, one of having attended a course of botany and materia medica at some school recognised by the Society.

If the Council passed this resolution it would show that they were aware of the necessity of being abreast of the times. If they rejected it they would widen the gulf between their Society and the medical profession, which was not desirable. The present was a time of enormous development and progress in every department; and in none were the progress and development so marked as in the medical profession. Dr. Burnes read an extract from an address by Dr. Alexander Macalister to the Medical Society of London, commenting on the burdens now laid on medical students. The pharmaceutical student, continued the speaker, when he has arrived at the end of his curriculum, is supposed to have obtained his knowledge of *materia medica* at the counter, and he is only expected to have spent, in addition, 100 or 120 hours at practical chemistry. It is three years since the Society's chemical school was inaugurated, and during the interval ample proof has been given of the progress and success of the pupils who have availed themselves of it. It is high time to develop the departments of *materia medica* and botany, which are of such paramount importance. He then read extracts from letters he had received on the subject of his motion. Dr. Duffley quite approved of the motion and hoped it would be carried. Dr. Ninian Falkiner was very decided in his opinion that the Pharmaceutical Society should teach in detail all the subjects in which they examined within their own walls. Dr. Cosgrave heartily concurred in the resolution. Dr. Whitla, Belfast, highly approved of it, and remarked that it was impossible for a man to learn the subjects to which it referred by private study—he might cram them, but he could not know them—and he added that there were facilities for the study of those subjects by pharmaceutical students now existing in Belfast, Cork, Dublin, and Galway, so that any assistant could spend six months at them. A new laboratory, he mentioned, was being opened in the Queen's College, Belfast. Dr. Montgomery quite agreed that pharmaceutical students, as a rule, did not pay sufficient attention to the subjects in question; he added that of course lectures should be supplemented by practical work. Mr. Robinson, Kingstown, had also written highly approving of the motion.

Mr. MERRIN seconded the resolution, which was supported by Mr. CHARLES EVANS.

Professor TICHBORNE said in a general way he endorsed Dr. Burnes's views. He would suggest, however, that too high fees should not be charged, and also that if the motion should be carried—which he hoped would be the case—the matter would be referred to the School Committee for a report as to details, which should afterwards come before the Council for discussion.

Mr. CONYNGHAM said he quite agreed with Dr. Burnes's views. At the last examination the candidates showed that they had not a sound grasp of *materia medica* and botany, and a few knew nothing at all about them, and hardly knew how to dissect a plant.

In reply to the President, Dr. BURNES said he accepted Professor Tichborne's suggestion as part of his resolution—viz., that the subject should be referred to the School Committee for a report.

The motion was then put, and carried unanimously.

DIVIDING THE PROFITS.

Dr. BURNES then moved a resolution relating to certain balances which had accumulated in the bank to the credit of the Society's school. One was a balance of 19*l.* odd, for which there were no receipts, and which could not be traced, and he thought it should be divided between the professors and the Society in the usual proportions. There was a further balance of 10*l.* 11*s.* 8*d.*, which was fully accounted for.

After some discussion, the question as to the 19*l.* was referred to the professors, in order that they might endeavour to trace it by a reference to their attendance-rolls since the commencement of the school.

On the motion of the VICE-PRESIDENT, seconded by Mr. GRINDLEY, the 10*l.* 11*s.* 8*d.* was transferred to the funds of the Society.

MEMBERS AND ASSOCIATES.

On the motion of the PRESIDENT, seconded by Mr. GRINDLEY, Mr. John Murphy, 17 Bridge Street, Cork, and Mr. Henry R. Warren, 6 Bridge Street, Bandon, were elected members of the Society.

On the motion of Mr. MONTGOMERY, seconded by Mr. LYONS, Mr. Charles Marshall, 39 Hamilton Street, Belfast, was elected a member of the Society.

On the motion of Mr. HODGSON, seconded by the PRESIDENT, Mr. John Harty, 63 Castle Street, Nenagh, was elected an associate-druggist.

The Council then adjourned.

Trade Notes.

Mr. R. C. TREATT, of Dunster House, Mincing Lane, left on Wednesday for a business-trip to the United States.

Mr. ENOCH PALMER, chemist and druggist, Grimsby, has been awarded a gold medal and diploma of honour at the Cornwall Fisheries' Exhibition, for his sea medicine-chests, fitted.

MESSRS. BLONDEAU ET CIE., the proprietors of "Vinolia" soap, pay half the fees of any employé who attends evening classes in any part of London. This ought to ensure for them a good return in more intelligent service.

MESSRS. BREIDENBACH & CO., of Greek Street, Soho, have produced some richly-perfumed sachets packed with a flowery card-envelope ready for posting as Christmas and New Year tokens. They can be sold at a very moderate price.

MR. KARL SCHMIDT, of Wunsiedel, in Bavaria, informs us that he will be in London from November 13 to November 20, with a collection of samples of vegetable drugs and statite, which he desires to introduce into this country. Mr. Schmidt may be addressed at De Keyser's Hotel, Blackfriars, E.C.

MESSRS. BLYTON, ASTLEY & Co., of Manchester, have added the manufacture of medicinal and surgical plasters to their medicated-lozenge business. They have set up the latest plaster-machinery, and are now supplying spread and shaped plasters of all kinds, as well as coru-plasters. They will shortly be ready to produce porous and rubber combination plasters.

MESSRS. JOHN MOSS & Co., of Galen Works, Deptford, S.E., send us a sample of malt extract which they sent out to a customer three years ago, and is returned to them as a curiosity. The fact is that the extract is as clear and sweet as on the day it was made, and has not candied in the slightest. It has been packed in 1*s.* jars all the time, and it is a jar that had been overlooked which is returned to the makers.

WE are glad to notice that Messrs. W. Bleasdale & Co., of York, have been able to make use of English soil for the growth of the pansies from which they are now making liquor violæ and syrupus violæ. These flowers, and many others which are used medicinally, can be grown as well in England as anywhere else, and Messrs. Bleasdale & Co. demonstrate that it is possible for the wholesale druggist even to undertake the work, and do it, we hope, profitably; but that depends upon how the liquor and syrup go. The flowers they send us are nice.

SYDNEY SMITH & SONS (LIMITED).—Capital, 5,000*l.* in 100*l.* shares. Objects: To carry on the business of grocers, provision-merchants, chemists and druggists, drysalts, oil and colour merchants, mineral and aerated water manufacturers, &c. Sydney Smith is the managing director. Office: 26 Kirkdale, Sydenham, Kent. Registered without articles of association. The first subscribers (who take one share each with one exception) are:—Sydney Smith, 26 Kirkdale, Sydenham, grocer, 44 shares; Maria Smith, wife of above; S. W. Smith, 4 Rye Villas, Byne Road, Sydenham, grocer; J. Hunter, 7 Cornhill, E.C., clerk; G. H. Burns, 2 Franklin Road, Anerley, accountant; W. Smith, Caterham, grocer; H. T. Parker, 112 Norwood Road, Tulse Hill, grocer.

The Chicago Exposition.

THERE is still a fair number of exhibits of fine chemicals and pharmaceutical exhibits in the German Court to be noticed, and to-day we cannot do better than begin with that of

H. THIEMANN, JUNR., OF STOLP.

This consists of alcohols, ethers, and acids of the paraffinic series. What we specially noted about this was the samples of succinic acid and succinates illustrating the distillation of amber resin, this being a department which Mr. Thiemann has specialised. Benzoic acid and its salts—both alcoholic and mineral—are also a feature, and liquid benzoates include the natural and artificial almond oils, oil of niobe, and vinous extracts (cognac, &c). The exhibit is a good illustration of the tendency of technical chemistry to go into grooves. This is becoming more and more marked, with the result that many substances which were formerly rare and expensive are becoming plentiful and cheap, with consequent benefit to man, particularly in refining taste.

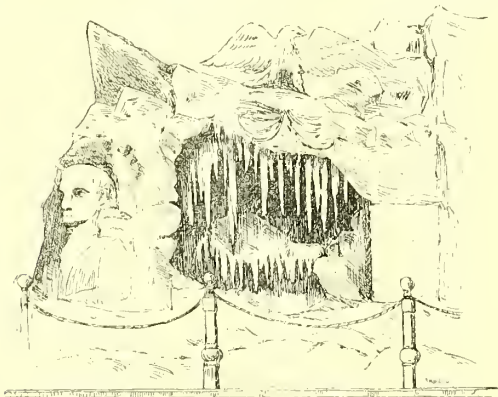
FRIEDR. WITTE, ROSTOCK.

There is an element of sadness now attached to the exhibit which we next refer to. Dr. Witte was one of the active organisers of the German Chemical Court, and spent some weeks in Chicago superintending its arrangement. He made his own exhibit one of special scientific interest, in scope far beyond his immediate trade relations, for he included in it a collection of scientific preparations—that is, rare chemicals of the aromatic series for educational purposes—for no other object, apparently, than to show what German chemists allied to pharmacy can produce. Dr. Witte returned to Germany and died ere visitors to the Fair had begun to appreciate the value of his work. The commercial side of his exhibit consists of fine chemicals, galenicals, scale preparations, and digestive ferments. Pepsins are shown in strength from 1:1,000 to 1:30,000! There is not much of the last (a few drachms only), but it is curious that the digestive power is exerted in two hours, or forty-five minutes less than any of the others. This is the strongest specimen of pepsin which has ever seen daylight. A rennet extract in powder is also shown, which curdles 300,000 times its weight of milk in 40 minutes—i.e., a single grain converts about 35 pints of milk into curd. This is a commercial article.

So far we have referred to most of the chemical exhibits in Section II, which are of pharmaceutical interest; there are some more technical in character, and a few of quite a commonplace type. The only general druggists' sundries exhibit is made by A. WASMUTH & Co., of Ottensen, for whom Warriek Brothers are acting as agents in this country in respect to "corn-plaster rings in the watch." The Wasmuth exhibit is a nice one, and includes a variety of sundries which are seldom seen out of Germany.

THE FATS AND OILS SECTION

next claims our attention, but before we proceed to the exhibits there our attention is attracted by a beautiful ultra-



marine cave, which our artist has endeavoured to give verisimilitude to in black and white. This has been erected by

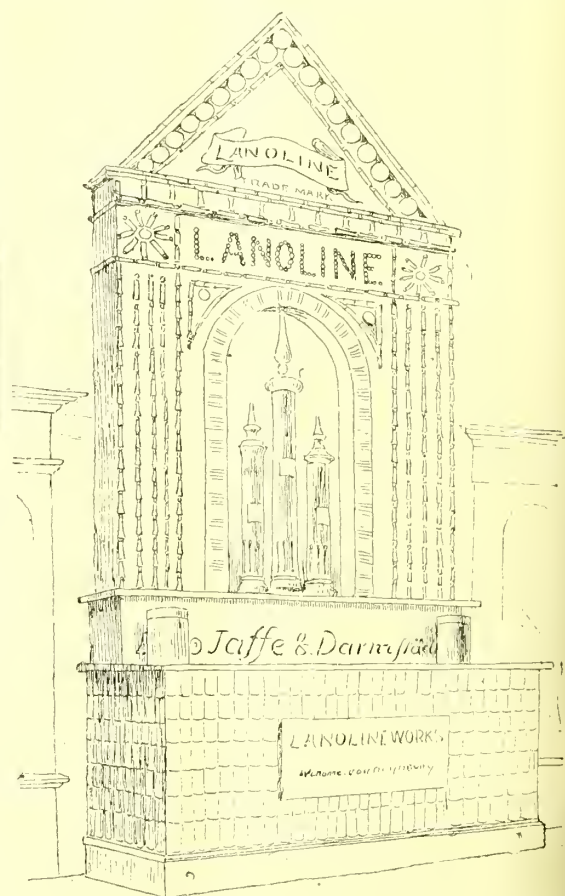
the United Ultramarine Works (VORM. LEVERKUS, ZELTNER, & CONSERTEN) of Nürnberg. It is a blue grotto and rocky structure, in front of which lies a Sphinx, which is intended to symbolise the secret of the formation of ultramarine. The group of rocks is surmounted by an eagle which holds in its claws the flags of the United States and of Germany. A rather ambitious structure for the exposition of laundry-blue; but then the company turn out about five million marks' worth of that per annum. First in Section VI. we notice a tasteful exhibit by

JOHANN MARIA FARINA, 4 JÜLICH'S PLATZ.

This is the only exhibit of the kind in the court—indeed, perfumery is at a discount amongst the chemical products. But this firm, although allocated a small space, have succeeded in making the most of it by showing all varieties of their goods with the old labels, and the new and distinctive gold one.

BENNO JAFFÉ & DARMSTAEDTER,

of Martinikenfelde, near Berlin, show only lanoline. The exhibit is placed against the wall of the court, and is not enclosed. Our sketch best describes its form. The door-



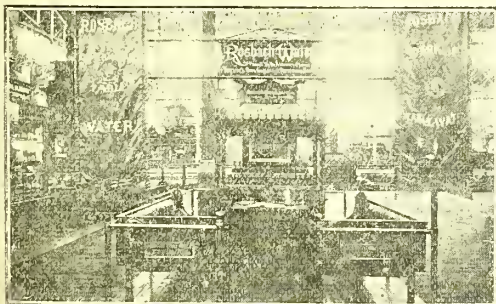
posts and canopy are made up of tubes and boxes of lanoline and its preparations, the base being built up of seven rows of 1-lb. tins. In the doorway are vases of toilet lanoline, lanoline, and anhydrous lanoline. The effect of the whole with the crimson setting is very nice. There is sometimes doubt in English minds as to how lanoline should be spelt. Some omit the final "e"; others don't. We may settle the matter by stating that "Lanoline" in a scroll is the trade-mark in Belgium, France, the United Kingdom, and the United States; while "Lanolin" over a double circle of arrows is the trade-mark in Germany, Denmark, Italy, Netherlands, Norway, Austria, Roumania, Russia, Switzerland, Spain, and Hungary. It is therefore incorrect to use "Lanolin" in this country.

L. LEICHER, BERLIN,

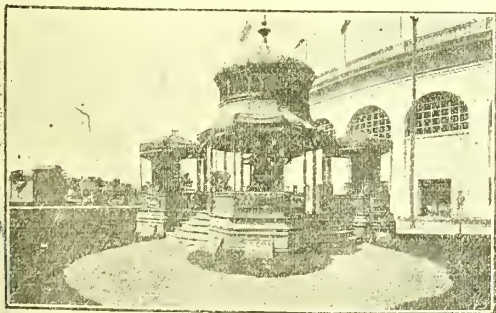
has an exceedingly pretty exhibit opposite the pavilion. Mr. Leichner is a perfumer, but, strange to say, does not export perfumes except his "Eau de Lys," which Chinese and Japanese ladies are extremely fond of. His exhibit is confined to face-powders, stage-paints, and "make-up" generally. The exhibit has been in charge of Mr. Fritz Leichner, who is returning from a prolonged business journey for his firm, in the course of which he has visited almost every country on the globe. He left Berlin seven years ago. This fact is a tolerably good indication of the universal use of face-powders. Leichner's special article is "Fett-powder," the property of which is that it adheres to the skin and does not form tell-tale streaks with trickling perspiration. There is a good exhibit of this powder and of others, including hair-powders in all shades. Of stage-paints there is a bewildering collection, for there is a specimen of all the kinds that are used in the different countries of the world. That means a great variety, for most countries have their peculiarities; for instance, some shades of paints are made which are only used in England and Australia. Then professionals use long sticks, amateurs short ones. The colours lie between "No. 1 Lady" and "Cavallario Rusticano." There is a world of mystery and a rainbow of colour in the gap. Besides these articles Mr. Leichner is a maker of powder-puffs, and a pyramid of these forms the centre of the exhibit. This pyramid is surmounted by an artistic pavilion, and the base of the case is carpeted with lilac-coloured satin. We may add that Messrs. Hovenden & Sons are English agents for Mr. Leichner's manufactures.

ROSBACH WATER.

The American correspondent whose impressions of the Chicago Exhibition we published a week or two ago mentioned how tastefully the Rosbach Water Company had done up their exhibit in the Mines Building. We have been favoured by Messrs. Hertz & Collingwood with photographs



of the exhibit, and give a reproduction here. It speaks for itself. But this was not the only exhibit made by the company. In the grounds close to the Agricultural Building is the Rosbach Pavilion, where visitors can always sample the Rosbach water, while Franz Josef, Levico, and other waters with which the names of the company and the firm men-



tioned, as well as Burroughs, Wellcome & Co., are associated were exhibited. This pavilion formed a pleasant house of call for pharmacists, and the exceedingly tasteful manner in which it was done up is a compliment to the skill of Mr.

Molloy, the president of the American Rosbach Company, under whose superintendence it was designed and erected. There was also an exhibit by the company in the Agricultural Building.

SHEEP-DIP EXHIBIT.

One of the attractive features of the Fair during the latter months, writes a correspondent, was the exhibit made by Messrs. William Cooper & Nephews, of Berkhamstead, England, and Galveston, Texas. Their exhibit was not put in place until the very end of July, as it was associated with the live-stock exhibit, which did not begin until then. Mr. C. Timson, the manager of the firm's American business, had a splendid display of his firm's goods, and it was made doubly interesting by an exhibit of wools of different classes treated with various dips, to show the different effects of the leading dips upon the fibre. Under the microscope, living insects—such as the tick, scab-parasite, &c.—were shown. Also in connection with the live-stock exhibition, Messrs. William Cooper & Nephews presented for competition prizes amounting to \$750, for the best results in treating sheep with the dip. The prizes included a number of handsome silver cups, and the competition created much interest amongst stock-rearers.

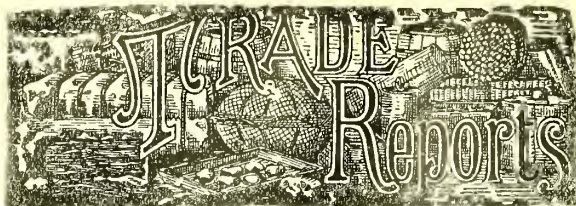
BRITISH AWARDS.

IN addition to the firms mentioned last week, and which consisted chiefly of those who exhibited in the manufacturing section, most of the English exhibitors in the Liberal Arts Gallery, and many of those in the Agricultural Building, whose exhibits are allied to pharmacy have obtained awards. In these groups we have received notification of the following, exclusive of colonial exhibitors and those named on page 665:—

- Ash, Claudius, & Sons (Limited), Broad Street, Golden Square, London, W., dental sundries.
- Baker, Joseph, & Sons, City Road, London, E.C., lozenge and other machinery.
- Beck, R. & J. Cornhill, London, E.C., photographic apparatus.
- Crosse & Blackwell, Claridge Court, Road, London (2 awards), condiments and sauces, &c.
- Crickshank, A. B., 24 Great Western Road, London, W., "Vanda" syringe.
- Darton, F., & Co., St. John Street, Clerkenwell, London, E.C., metacore logical instruments.
- Edmunds, J., Belper Street, Barnsbury, London, sauces and condiments.
- English Dental Speciality Company (Limited), New Barnet, dental apparatus and chair.
- Fry, J. S., & Sons, Bristol, cocoa and chocolate.
- King & Co. (Limited), Belfast, and 3-6 Canonville Street, London, E.C. Edwards' desiccated soups and vegetables, also for white soup an extra medal and diploma.
- Macdonochie Brothers, Lowestoft, Fraserburgh, and London, sauces.
- Parkinson, R., & Sons, chemists, Burnley, baking and custard powders.
- Price's Patent Candle Company (Limited), Battersen (5 awards), stearin, paraffin, toilet soaps, glycerine, and candles.
- Riddle, A., & Co., Commercial Street, London, E., Stower's lime-juice.
- Riley Brothers, Bradford, optical lanterns and slides.
- Rose, L., & Co., Leith and London, lime-juice and lime-juice cordial.
- Ross & Co., New Bond Street, London, W. (3 awards), lenses, field-glasses, and instruments.
- Ross, W. A., & Sons (Limited), Belfast, ginger-ale, &c.
- Watson, W., & Son, High Holborn, London, W.C. (3 awards), astronomical, &c., instruments, lanterns, and photographic lenses.

It is reported that the medals will not be ready until June next, and until they are ready successful exhibitors will not receive their diplomas. A bronze medal and diploma constitute the only award, and both go together. Originally it was intended not to give a medal at all, but the promoters have been compelled to accede to a commonly-expressed desire.

PHARMACY IN THE "ANNEXED PROVINCES."—As the result of an interesting study on the practice of pharmacy in Alsace-Lorraine by M. Jehl, it appears that Alsace, with a population of 1,500,000, has 229 pharmacists—say, one pharmacist for every 6,900 inhabitants. In the city of Strasbourg, however, the scale is increased, there being 30 pharmacies for 125,000 inhabitants, or 1 per 4,000. This is about the average proportion in France.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., November 9.

The Drug-auctions.

At the last drug-sales it was decided that Thursday of this week being Lord Mayor's Show Day, the sales would be held on Wednesday, and drugs placed on show on Monday. As it turned out, however, no sales whatever were held, excepting one, in which senna only was offered. The reason for this is probably that, trade being very bad, any excuse, even so slight as the November procession, was eagerly seized as a plea for not holding the auctions.

Crisis in the German Aniline-dye Trade.

The shareholders of the chief German aniline-dye works have for several years been accustomed to receive fat dividends, which, no doubt, have rendered them objects of envy to the holders of shares in less prosperous concerns. But at last the tide has turned, even in the aniline-dye industry. For some time there has been a constant and noteworthy drop in the shares of the great Badische Anilin und Soda Fabrik, and this has been followed by a similarly pronounced fall in those of the "Farbwerke" in Höchst-on-the-Main, a concern better known here by its old name of Meister, Lucius & Büning. The shares of the last-named business dropped 8 per cent. in one day last week. It would seem that some shareholders have been seized by a sudden wish to realise their holdings, for although the offers of shares are not large, they appear to keep on persistently. The explanation of the drop, so far as the Badische Fabrik is concerned, is that although the first half of the present year has been a very favourable one, and warranted the belief that it would be possible to distribute a dividend exceeding that of 1892, the whole of the profits have been swallowed up by the complete prostration of the large American export trade of the firm in the third quarter of the year. It is hoped that the final quarter of the year will turn out sufficiently profitable to enable the firm, after all, to declare a dividend equal to that of last year. The directors of Baeyer's Works in Elberfeld have made a statement to the effect that the results of the business over the current year are such as to warrant the statement that it will be possible again to distribute the same dividend as last year—viz., 13 per cent. In connection with these statements, which are freely made in the German Press, it may be pointed out that there has lately been a good deal of "cutting" going on in the staple aniline dyes, and that prices of some of these are believed to leave scarcely any margin for profit. On the other hand, all the factories own patented preparations, the profits of which are necessarily large. Of late years a considerable part of the profits of some works is made out of medicinal preparations rather than out of dyes. For instance, it is currently believed that the consumption of antipyrin alone is about 75 tons a year, representing a value of over 300,000*l.*, the great bulk of which is clear profit.

ACID (CARBOLIC).—Very sluggish. There are considerable stocks, and in spite of the continued existence of the "combination" among the producers, there is a general

feeling that prices will decline further as the cold season advances and consumption decreases. The current quotations are:—*Crystals*, 39–40 per cent., 5½*d.* to 6*d.* per lb.; 34–35 per cent., 5*d.* per lb.; *crude*, 60 per cent., 1*s.* 5*d.* to 1*s.* 6½*d.*; 75 per cent. 1*s.* 9*d.* to 1*s.* 9½*d.*; *cresylic*, 95 per cent., 1*s.* 2*d.* to 1*s.* 3*d.* per gallon.

ACID (CITRIC).—A quiet market, at 1*s.* 5½*d.* to 1*s.* 6*d.* per lb.; concentrated juice is quoted at 15*l.* f.o.b.

ALGES—"Next drug-sales will see the bottom knocked out of *Curaçao* aloes," said one or two dealers on 'Change this week. In this case the wish may have been father to the thought, but it is nevertheless a fact that the imports of this variety of aloes have been rather heavy lately. Since the date of our last report, 374 packages, in three consignments, have been landed by New York and Rotterdam steamers, and if the arrivals continue we may see *Curaçao*-aloes almost as unsaleable again as it was until the beginning of this year. There have also been two heavy arrivals of *Cape* aloes (53 and 95 cases respectively), which may send the market down at the next sales.

ARAROA.—Fair grey to yellow powder continues to be sold at 2*s.* per lb.

BALSAM (COPAIBA).—The Liverpool market is firm at some slight advance. Cloudy *Maranham* balsam has been sold at from 1*s.* 6*d.* to 1*s.* 6½*d.* per lb., and *Bahia* at 1*s.* 4*d.*

BALSAM (PERU).—Firm, but quiet. The spot price for good balsam is 5*s.* 6*d.* to 5*s.* 9*d.* per lb.

CAMPHOR (CRUDE).—A fair amount of business is doing, it is said, in both varieties of this drug. *China* camphor, October-December shipment, has been sold at 105*s.* per cwt., c.i.f. terms. About 40 tons *Japan* camphor, near at hand, have also been sold at from 135*s.* to 142*s.* 6*d.* per cwt. c.i.f. A cablegram to-day quotes higher prices, viz., 107*s.* 6*d.* c.i.f. for *China*.

CAMPHOR (REFINED).—The German manufacturers have this week reduced their quotations by 1*d.* per lb., and quote bells, and tablets from 16 to 1 oz. at 1*s.* 7*d.* to 1*s.* 7½*d.* per lb., tablets of less than 1 oz. from 1*s.* 7½*d.* to 1*s.* 8½*d.* per lb. according to quantity and size of tablets. These prices are net "c.i.f." terms. The object of the reduction appears to be the anxiety of the German makers to "kill off" the Japanese competition before it takes root too firmly in Europe. To-day the English refiners have to some extent followed the example of their German colleagues by reducing the price of camphor bells and tablets by ½*d.* per lb. all round. Flowers remain unchanged at 1*s.* 7½*d.* to 1*s.* 8*d.* per lb. according to quantity; bells are now 1*s.* 8*d.* to 1*s.* 8½*d.*, and tablets are quoted in proportion to their size.

CARAWAY.—*Dutch* seed has fallen a little from the high prices at which it has stood lately; the current quotation is 23*s.* 3*d.* per cwt., f.o.b., whereas quite recently 32*s.* 6*d.* per cwt. was asked for similar quality.

CASCARA SAGRADA.—There have been a good many inquiries the last two or three days. For good quality in London 35*s.* is asked.

CASTORUM.—The annual castorum sales of the Hudson's Bay Company will be held on December 13. The quantity to be offered at auction only amounts to 1,216 lbs., which is a comparatively small parcel.

CHILLIES are dull of sale, and at auction no transactions took place, ordinary small Java fruit being bought in at 22*s.*, and good red *Sierra Leone* at from 42*s.* to 45*s.* per cwt.

CHLOROFORM.—Two Scotch makers have raised their prices 2*d.* per lb. all round, and now quote as follows:—*Pure chloroform* (B.P.), 1*s.* 9*d.* to 1*s.* 11*d.* per lb. according to quantity; *rectified chloroform* (from alcohol), 4*s.* 6*d.* to 4*s.* 8*d.* per lb. according to quantity. The rise is probably owing to the practical disappearance from the market of a competing brand.

CINCHONA.—The October exports from Java, as announced by cable, show a very heavy decline compared with those of October, 1892, the figures being:—

Oct. 1892	Oct. 1893
About 800,000 Amst. lbs.	About 380,000 Amst. lbs.

The excess of the Java shipments during the current year compared with 1892, which was about 2,000,000 lbs. on

September 30, has now been reduced to about 1,500,000 lbs. The London cinchona auctions of Tuesday next, which at first seemed likely to be very small again, will be somewhat larger after all than was anticipated, some 700 bales of ten or twelve-year old Cuprea bark having just been declared for sale. A parcel of this bark, which was bought in at the last auction, has since been sold privately at $7\frac{1}{2}d.$ per lb., which is equal to about 9s. per seron. The hide-covering of each package alone is worth about 6s. The total quantity of other bark now catalogued is 423 bales Ceylon and East Indian, 56 Java, and 190 cultivated Calisaya quills.

CINNAMON.—The demand still continues, about 300 bales Ceylon cinnamon, November–December shipment, usual assortment, having sold this week at $6\frac{3}{4}d.$ per lb. c.i.f. terms.

CLOVES.—This week the market has recovered somewhat. At auction 667 bales Zanzibar cloves were offered. Of this quantity 384 bales sold steadily (mostly without reserve) at from $2\frac{1}{2}d.$ to $2\frac{3}{4}d.$ per lb. for medium to good bright, one fine lot realising $2\frac{1}{2}d.$ per lb. Ordinary unpicked to good fair picked Penang sold at $5\frac{1}{2}d.$ to $7\frac{1}{2}d.$ per lb. For delivery Zanzibar cloves close firmer, with small sales at $2\frac{1}{4}d.$ per lb. for January–March.

COCAINE.—There has been another big drop in cocaine, the manufacturers having suddenly put the price down another shilling per oz., 14s. to 14s. 3d. per oz. being the present figure for hydrochlorate in bulk. The cause of the drop lies partly in the heavy imports of crude cocaine from Peru, and partly in the determination of the older manufacturers to crush a German competitor who has lately begun to undersell them.

COCOA-BUTTER.—At the usual monthly sales, held on Tuesday, 350 2-cwt. cases of Cadbury's cocoa-butter sold at from $12\frac{1}{2}d.$ to $13\frac{1}{2}d.$ per lb., marking an average decline of $1d.$ per lb. upon the preceding sales.

CORIANDER.—Still rising, 25s. to 26s. per cwt. being now wanted for good seed.

CREAM OF TARTAR is somewhat easier again. Best white French crystals may now be had at 70s. per cwt. on the spot; powder at 72s. per cwt. The Bordeaux quotation is 64s. 6d., f.o.b.

CUMIN-SEED.—*Mogadore* has been in strong demand, and is decidedly higher. A considerable quantity in London has been bought up at prices ranging from 25s. per cwt. To-day a bid of 30s. was refused for a parcel of very fine Mogadore seed, which is held for 31s.

DAMIANA-LEAVES are very scarce, especially in good green quality, which has been sold this week at the rate of 1s. 5d. per lb.

ERGOT OF RYE.—*Spanish* ergot is quiet on the spot, at 1s. 2d. per lb. for good quality. New-crop *Russian* is said to be offered at the rate of 1s., f.o.b. Trieste.

GINGER.—A decline of 2s. per lb. was established in *Cochin* ginger, of which about 450 packages (partly of old import) were offered "without reserve," the following prices being accepted:—Fine bold cut (1887 import) AA, 30s.; ordinary to fair ditto (A), 74s. to 78s. 6d.; ordinary small to medium-washed rough, 53s. 6d. to 55s. 6d.; good bright medium to bold ditto, 57s. to 57s. 6d. per cwt. A parcel of 24 bags limed sliced *Japan*, offered "without reserve," realised 48s. 6d. *Jamaica* ginger was in small supply, and none sold. Sales of *Bengal* ginger on the spot have been made at 54s. per cwt. Since the auctions the decline in *Cochin* has been recovered.

GLYCERINE.—Firmly held. Somewhat higher prices are anticipated in various quarters now that the principal season for consumption is beginning. Some makers ask as much as 48s.; others would take a little less than that.

GUM ACACIA.—*Soudan* sorts continue to sell at from 40s. to 50s. per cwt. for glassy hard to fair bright. To-day a fair demand for *Soudan* sorts, and a hardening-market tendency, are reported from Liverpool. The total sales of *Soudan* sorts in Liverpool during the month of October amounted to 295 serons. A parcel of 85 cases *Niger* gum has also been sold there at 35s. per cwt.

GUM EUPHORBIIUM.—Higher prices are said to be asked by the importers, namely, 37s. 6d. to 40s. per cwt. for dusty lots mixed with dirt and wood as usual.

GUM TRAGACANTH remains firm, at 12l. for good pale curly Bagdad seconds, and from 10l. 15s. to 11l. 5s. for thirds, according to quality. Business has also been done in the lower grades.

HONEY.—There has been a strong demand for *Californian* honey in Liverpool lately. During the month of October about 200 cases of this variety sold at from 28s. per cwt. for common quality of the old crop to 38s. per cwt. for good bright new. The parcel of good *Californian* honey to which we referred in our last, has since been sold at 39s. per cwt.

IPECACUANHA.—There has been an improved demand for *Brazilian* root, at an advance of about 3d. per lb. on the last sale-rates. *Colombian* root has also been inquired for, damaged, but plump, has been sold at 3s. 9d. per lb., 4s. being asked for good sound. The imports for October amounted to 43 packages *Brazilian* and 24 *Colombian*; the deliveries to 111 *Brazilian* and 56 *Colombian*.

JABORANDI.—Genuine leaves are held for high prices and are rather scarce. A parcel of 10 bales brownish stalky and broken, but genuine, leaves imported into Liverpool by the *Theresina* is firmly held for 1s. 6d. per lb.

JALAP remains firmly held at 1s. 6d. for good Vera Cruz.

KAMALA.—This drug, which has lately been scarce and somewhat higher in price, is now again arriving more freely. Seventeen cases have been imported from Bombay this week. Good sifted kalama is reported to have been selling privately at 1s. 2d. per lb.

LITHIA SALTS are again lower. *Carbonate* may now be had at 6s. per lb.

MORPHIA.—The makers are competing against each other, and prices are thereby brought down; *powder* could probably be bought at 4s. 9d. per oz.

OIL (CASTOR).—Easier, and large sales of good seconds *Calcutta* have been made at $2\frac{1}{2}d.$ per lb. No change has taken place in the *French* oil, which still fetches $2\frac{1}{2}d.$ first pressure, and $2\frac{1}{4}d.$ per lb. for second pressure.

OPIUM.—There has been very little demand in London, and business has been almost entirely restricted lately to small sales of old manufacturing opium, for which somewhat lower prices have been accepted. The following are the current quotations:—*Soft-shipping*, good to fine, 12s. to 13s.; *Smyrna*, good to fine, 11s. to 12s. 6d.; second quality *Druggists'*, 9s. 6d. to 10s.; ordinary to fine *Constantinople*, 10s. to 12s.; *Persian*, 9s. to 11s. 6d. per lb. The firm which has lately failed in Constantinople is said to have controlled about 400 cases of opium, of which about 300 are in London, and there has been some rumour that these would be offered for sale without reserve. That report, however, is contradicted by those who should know the holders' intentions. The parcel is in the hands of two firms who can well afford to hold on to it. A bid for 27 cases *Persian* opium was refused to-day. The following is from a *Smyrna* correspondent, under date of October 28:—"Our opium market has been very quiet throughout the month, the only demand at present being for selected *Karahissar* suitable for the Dutch-Indian consumption, for which there are buyers at the equivalent of 12s. 3d. to 12s. 6d. per lb. f.o.b. Slightly seconds are scarce; the last price paid was 11s. per lb. f.o.b. Manufacturing is obtainable from 10s. 6d. to 10s. 10d., according to quality. Our arrivals to date 780, against 3,200 at the same time last year." Constantinople news, dated October 31, agrees with this in the main. It says: "A quiet falling market is all we have to report for the last half of October. A few cases of selected *Karahissar*, at about 11s. 8d., f.o.b., were bought to complete sales to Holland. Yesterday the agent of an American speculator took 25 cases *soft grades*, old and new mixed, at about 11s. 2d., f.o.b., and holders are now asking 6d. more. *Druggists'* grades are neglected, at 9s. 6d. and under a fair quantity could be secured. The weather has been fair for the sowings, and unless America stretches forth a helping hand, values must decline."

ORRIS.—Reports from Italy, dated November 1, state that during the month of October there has been a very active inquiry for orris-root, partly owing to export orders and partly for speculation. This demand has resulted in an advance of about 10 per cent. There have been considerable

sales in London lately on the basis of 95s. per cwt. for fine pale Florentine

QUASSIA.—An exceedingly heavy market. The price has now gradually slipped away to 80s. per ton for logs. Small sales were recently made at that figure.

QUICKSILVER.—The quotations close this week without change in price—viz., 67. 7s. 6d. from the importers, and 67. 7s. in second-hands, but a heavy sale is reported to have been made by the importers at 67. 5s.

QUININE.—No business has been reported in the article this week. German second hand bulk being still quoted at 9 $\frac{3}{4}$ d. per oz. A second-hand sale of 1,000 oz. of Pelletier's quinine in bottles was made to-day at 1s. 4d. per oz.

SAFFRON.—Some of the importers have now come down with their prices to the figure quoted by the firm who have been underselling their colleagues. To-day 21s. to 21s. 6d. per lb. is the current quotation for good to finest *Valencia*. There are dealers, however, who maintain 23s. per lb. to be the lowest figure at which they can put "really finest unloaded saffron" upon the market.

SENNA.—The only catalogue of goods constituting this week's "drug sales" comprised 368 bales of *Tinevelly* senna recently landed. This parcel was strongly competed for, the brisk American demand being especially noticeable, and an advance of from 10 to 15 per cent. on the previous auction rates was established, good medium to partly damaged bold and green leaves realising from 5 $\frac{1}{2}$ d. to 6 $\frac{1}{2}$ d.; medium fair to good yellowish and green, partly specky, leaves from 3 $\frac{1}{2}$ d. to 5 $\frac{1}{2}$ d.; medium to small greenish to dull leaves, 2d. to 3d.; common specky dull to low black, from 1 $\frac{1}{2}$ d. to $\frac{1}{4}$ d. per lb. Only 57 bales of the parcel were in sound condition. The arrivals of new crop *Tinevelly* leaves are holding on. The *Peshawar* brought 534 bales from Bombay this week. The auctioneer who insisted upon holding a sale this week has therefore no doubt done better than if he had waited for another fortnight.

SHELLAC.—At the auctions 518 cases were offered, and 260 sold at an irregular advance of from 1s. to 5s. on *second orange*, while *button lac* realised very firm prices. Holders were very firm, the statistical position and prospects of the market being generally considered very favourable. The following prices were paid: *second orange*—bright curly reddish worked, 101s. to 102s.; fair reddish to good strong bright flat unworked, 101s. 6d. to 105s.; livery to bright blocky, 99s. to 102s. per cwt. Shellac closes firm at rather high prices, with sales of fair bright *second orange* at 104s. to 105s., and blocky to good free garnet AC at 91s. 6d. to 93s. per cwt. In the speculative market 800 cases TN orange sold yesterday at 106s. for November and December, and at 106s. to 107s. for January delivery. For arrival the following business is reported: 400 cases TN October-December shipment at 100s. to 101s. 6d. "c.i.f." terms.

STROPHANTUS.—After a long cessation of imports, about 400 lbs. of fine green *Kombé* seed have been landed here this week. The owners mentioned 6s. 6d. per lb. as the price at which they would be willing to sell, and we hear to-day that the whole lot has been disposed of privately.

SUGAR OF MILK is exceedingly low in price at present mainly as a result of over-production, which has been carried on to such an extent that some factories have abandoned the manufacture of the article because it has ceased to pay.

TONQUIN BEANS.—It is reported from New York that the crop of Para beans will be a short one, and that higher prices are expected.

VALERIAN is steady. Best *Belgian* root is quoted at 30s. per cwt., and *French* at 28s. per cwt., for prompt delivery.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, Wednesday evening.

OUR market closes with a weak tone, the last price accepted for opium of current quality being the parity of 10s. per lb. here.

THE LIVERPOOL MARKET.

GUINEA GRAINS.—Further sales have been made at 20s. per cwt., holders having failed to establish the advance.

GUM ACACIA is moving off very steadily, and about 140 serons have been taken at fully late rates.

HONEY.—A steady business is passing, new pile 1 *Chilian* selling at 30s. 6d., and X at 34s. 6d. *Californian*, new pale liquid, is selling at 42s. 6d. per cwt.

JABORANDI.—Nine bales, part of the recent arrival, have been sold at 1s. 4d., which price holders ask for the balance.

THE NEW YORK MARKETS.

(From our Correspondent.)

NEW YORK, November 1.

ALCOHOL has been advanced \$2 per gallon by the Alcohol Trust. It may be that the movement is entirely normal, but it certainly deserves attention that there is a rumour that the Ways and Means Committee of Congress are considering the advisability of raising the internal revenue tax from 90c. per gallon, which it is now, to \$1.20. If such a step be taken the trust and all large holders of spirits will make a big profit. *Balsam copaiba* is in rather limited supply and is firm at 30c. in second hands. *Cascara sagrada* is dull at 7c. to 8c. *Cannabis Indica* has advanced, in response to stronger cables from Europe, to 14c. *Cocoa butter* has declined to 33 $\frac{1}{2}$ c. to 33c. for good Dutch. *Castoreum* offers freely at \$15 to \$16, with no business reported. *Damiana leaves* have declined to \$26, but no business is reported in them. *Guarana* is pressing for sale at 90c. to 95c., and finds few takers; the drug appears to have seen its best days. *Opium* is only fairly steady, the demand being quite restricted. *Quinine* continues very firm at unchanged prices of 19 $\frac{1}{2}$ c. to 19 $\frac{3}{4}$ c. regular terms, or 19 $\frac{1}{2}$ c. spot cash. *Ingostura tonquin beans* are quiet at the range of \$1.70 to \$1.85. *Borax* is dull and prices somewhat irregular, car-load lots are offering at 7 $\frac{1}{2}$ c. to 8c. for lump, or 8 $\frac{1}{2}$ c. for powdered. *Salt soda* diuretic has been advanced by manufactures to 90c. to 95c. H. G. H. *Peppermint Oil* has stiffened up, and not under \$2.60 is quoted as acceptable for single cases. Bulk oil is in good demand, and sells for \$2.20 to \$2.80 for Western and up to \$2.46 for Wayne County. *Gum Chicla* has declined to 23c., but at that figure finds no takers. Sales of *Ginseng* for export are reported in considerable quantities at \$2.25 to \$2.75 as to quality. *Golden Seal* is firm, with sales at 21c. *Jalap* is in good demand, and considerable quantities have sold at 28c. to 30c. *Mexican Sarsaparilla* is in limited supply and firm at 9 $\frac{1}{2}$ c. to 10c. from second hands, there being no supplies in first hands. *Senega* continues firm at the recent advance to 45c., but no further transactions are reported. *Texas Snake-root* is in light supply, and firm at 21c. to 22c. New-crop *California Mustard seed*, yellow, has been sold in large quantities to arrive at 3c. to 3 $\frac{1}{2}$ c.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from our Correspondent.)

AMSTERDAM, Thursday Evening.

AT the auctions held here to-day 4,534 bales, or nearly the whole of the Java bark offered, sold at an advance of about 20 per cent., at an average unit of 3 $\frac{3}{4}$ c. per lb. (= 3 $\frac{3}{4}$ d. per lb.). The following prices were paid: Manufacturing barks in quills, whole and broken, and in chips, 6 $\frac{3}{4}$ c. to 34 $\frac{1}{2}$ c. (= 1 $\frac{1}{2}$ d. to 6 $\frac{1}{2}$ d. per lb.); ditto root, 10 $\frac{1}{2}$ c. to 24 $\frac{1}{2}$ c. per lb. (= 1 $\frac{1}{2}$ d. to 4 $\frac{1}{2}$ d. per lb.); druggists' bark in whole and broken quill, and in chips, 8c. to 65c. (= 1 $\frac{1}{2}$ d. to 1s. per lb.); ditto root, 7 $\frac{1}{2}$ c. to 7 $\frac{3}{4}$ c. (= 1 $\frac{3}{8}$ d. to 1 $\frac{1}{2}$ d. per lb.). The chief buyers, in the order of their quinine purchases, were the Frankfort factory, Mr. Gustav Briegleb, the Brunswick, Auerbach, and Mannheim quinine factories. The manufacturing-bark offered contained 16 tons sulphate of quinine, or 443 per cent. on the average. About 1 ton contained 1-2 per cent.; 44 tons, 2-3 per cent.; 113 tons, 3-4 per cent.; 95 tons, 4-5 per cent.; 94 tons, 5-6 per cent.; 17 tons 6-7 per cent.; 9 tons, 7-8 per cent.; 1 ton, 8-9 per cent.; and 2 tons, 9-10 per cent. sulphate of quinine.



Memoranda for Correspondents.

Letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

The Benevolent Fund.

SIR,—Will you allow us a little space to try and remove the stigma of selfishness which attaches to many members of the trade. We believe it is due to want of thought or from misunderstanding in most cases.

In visiting a town of 40,000 inhabitants in the ordinary course of business, we were surprised to find that not one chemist subscribed to the Benevolent Fund. There was a tradition that one of them had for a few years sent 2s. 6d., but that was a matter of history. We found, from conversation, that the Benevolent Fund had in some way got mixed up with the Pharmaceutical Society in the minds of at least two.

Has it been sufficiently considered that just as one Englishman has a prior claim over a German, &c., so has the fraternity of the trade a special claim on chemists. The following considerations should be borne in mind:—

1. The Fund is not mixed up with the Society, though office-room is kindly given free.
2. The expense of management is nominal, being little more than stationery and stamps.
3. Year by year the subscriptions are divided amongst the beneficiaries. Donations and legacies only are invested.
4. The mere fact of being on the register entitles the chemist or his dependants to as good a claim as an M.P.S., whether a subscriber to the Society or the Fund or not.
5. The subscription can be as low as 2s. 6d., not $\frac{3}{4}$ d. per week, and that entitles to one vote.
6. Every 2s. 6d. paid to the Fund will, if the subscriber need votes, be placed to his credit. And who can say he and his are out of reach of misfortune!

We trust in future, before sending subscriptions to Timbuctoo and the Cannibal Isles, chemists will first send at least 2s. 6d. to the Benevolent Fund, remembering the brother who is near has a claim before the stranger.

None can surely be so poor that they will feel $\frac{3}{4}$ d. per week.

Yours faithfully,

Manchester, November 4. A. P. TOWLE & SON.

Pushing a Perfume.

SIR,—A short paragraph appeared in your issue of October 23 announcing that a Mr. Edward Jones, chemist, of Hanley, Staffordshire, had, on the recent meeting of the North Staffordshire Musical Festival held in that town, perfumed the hall with his "Trentham Bouquet," and had received an order from her Grace the Duchess of Sutherland.

I am instructed to inform you that the style and title of the "Trentham Bouquet," as applied to a perfume, is the copyright property of my client, Mr. J. W. Bilton, of this town (and formerly of Stoke-on-Trent), who registered title some years ago.

Yours, &c.,

H. HAROLD BROWN,

Nottingham, November 3.

Solicitor

The Quality of Otto of Rose.

SIR,—The writer of the article in your issue, No. 705, dated October 21, headed "The Quality of Otto of Rose," starts with the presumption that all pure attar of rose is completely identical in point of chemical and physical properties. This supposition, however, is at variance with fact; for absolutely

pure attars, free from every adulteration, may greatly differ from each other in respect to specific weight as well as with regard to rotatory power, just as their freezing point, as is pretty generally known, often varies widely. Such differences depend upon the different condition of the soil—which naturally varies in a large district like the attar-producing part of Bulgaria—upon the position of the plantations, and upon the influence of the weather during the growth of the roses, as well as during the distillation of the attar.

Those who possess an intimate knowledge of the subject know that differences such as the writer of the above-mentioned letter points out are by no means rarities, but often occur in a far more striking degree than he has mentioned in attars known to be absolutely faultless in respect of quality.

Yours truly,

October 27.

EXPORTERS

Lin. Terebinth.

SIR,—I see a lot of lin. tereb. P.B. made in small quantities, and the result of my experience is that it is thoroughly unsatisfactory. If plenty of time is taken, and the turpentine is added very slowly, a thick creamy liniment is sometimes obtained, and once in a while a good product is got by shaking the constituents together in a bottle, but generally we get a thin creamy liquid, which, on keeping, sets nearly solid, as you will see in the specimen I am sending you by this post. I find that the kind of soap used makes very little difference in the result, and that if a little more water is added, either at the beginning or at the end of the process, a thick cream results which does not "set" so soon.

I don't think that P.B. lin. tereb. is much used. "Lin. Stokes" is more in favour.

I am, yours truly,

QUIVIS. (158/32.)

Tropical Ringworm.

SIR,—With regard to your reply to "101/41. A. M."—"It is impossible to prescribe for the dark-skinned lady who has white blotches on her skin" (C. J. D., August 26), I would say that the lady is suffering from either "tropical ringworm" or "morphœa," both diseases being common amongst the black and dark-skinned people in Jamaica, and probably in the other West Indian Islands. "Dry," or "tropical ringworm," is known by white circular patches, rough surface, and intolerable itching, and is easily transferred from one to any other part of the body.

"Morphœa" is known by dull, white, irregularly-shaped, smooth patches, which rarely affects anywhere else besides the face, hands, and neck. No itching; and but for its unsightly appearance it would cause no discomfort.

"Dry ringworm" is generally caused by the patient having worn clothes washed or handled by someone who has had the disease, the primary cause being filth combining with the perspiration, which has a distinct peculiar odour in the above-named people.

The latter ("morphœa") is caused from want of iron in the blood, and affects chlorotic women very much. Primary cause: digestive derangements. Age from 14 to 35—very rarely above. Treatment, in simple "morphœa"—i.e., when there is absence of leucorrhœa, &c.—give purgatives, and dab the parts with

Pot. carb.	..	..	..	..	..	gr. xx.
Aq. ros. ad	..	..	..	..	..	℥j.
M. Ft. lot.						

When accompanied with other ailments they must be treated accordingly.

"Dry ringworm"—

Sodii hypsulph.	..	..	..	..	..	℥i-3ss.
Aq. ros. ad	..	..	..	..	..	℥j.
M. Ft. lot.						

To be applied by means of a rag. Or, ung. sulph.

The negroes scrub the parts thoroughly with some rough substance, then apply gunpowder or laundry-blue.

Yours truly,

Jamaica, October 1.

ALBERT J. SALMON.

MISCELLANEOUS INQUIRIES.

The Editor replies to queries of general interest, in the order in which they are received. Replies are inserted according to the space available. Postal answers cannot be supplied.

Back numbers, containing formulae, educational or other specific information can be obtained from the Publisher.

150/29. *Ginger*.—Are you aware that it is illegal for you to make coloured fires?

150/14. *Inquirer*.—We know of nothing that will cover the odour of fusel oil effectually, as that is a question of rate of evaporation. Most essential oils with strong odour boil higher than amyl alcohol, so that the latter will, to a large extent, exert its odorous influence while it lasts. Still, you might try eucalyptus oil: it is cheap, and may modify the odour considerably.

151/37. *T. R.*—Custard-powder is a good brand of corn-flour, coloured with turmeric or saffron, and flavoured. For Egg-powder use that *plus* a fourth of its weight of baking-powder.

151/19. *Purity*.—Any enamel has the same objection. The way to get the odour and taste of paint away is to expose the tank as long as possible to the air (the drier the better); after that let two or three waters stand in it, and you will find that all taste will have gone.

155/68. *Ezebeber* asks if we are right in describing Mrs. Ida Hall Roby as "Chairman of the Woman's Congress on Pharmacy." Yes, that is the official title. "Chairwoman" is a title rarely used: there is a risk of an "i" being dropped.

153/67. *Hereward*.—Eau Sedative, a French adjunct to the bath:—

	Parts			
Liq. ammonii .920	60			
Spirit of camphor	10			
Chloride of sodium	60			
Distilled water	1 030			

Dissolve the salt in the water, filter, add the spirit of camphor, and lastly the ammonia.

150/72. *A. P.* would like to have some idea of the value of "Culpepper's Herbal," edition 1850, in good condition.

[We have not seen the particular edition quoted. The editions of 1842 and 1879, 4to, cloth, coloured plates, are purchasable at 10s or 12s. Dealers of course would not give so much. The original edition (1652) fetches about 2l. 2s.]

157/40. *T. E. P.*—Lanolin is miscible with about 25 per cent. of water; put the lanolin in a warm mortar, and rub in the water very gradually, being careful that each addition is thoroughly incorporated before adding the next.

141/59. *Chemicus*.—The powder for Drenching Lambs during September and October consists of prepared chalk, coloured with rose-pink and slightly perfumed with rose-geranium oil.

151/50. *Curious*.—The sample of Dog's Mixture consists of balsam of sulphur diluted with raw linseed oil (1 part to 3 parts).

153/10. *J. M.*—Horse-embrocation.—It seems to consist principally of soft soap, spirit, turpentine, and rape-seed oil with a smaller proportion of oil of amber.

157/34. *A. B. S.*—To Silicate Wooden Boxes so as to Render Them Grease-proof put the boxes in shallow trays containing silicate-of-soda solution (commercial) for a few hours, and dry in a hot oven. They are offered so cheap that it is hardly worth the trouble to prepare them for oneself.

153/66. *Josephus*.—The best remedies for Pimples on a Youth's Forehead.—Give any simple saline purgative or sulphur lozenges; the face to be well bathed at least once a day in warm water, using a good neutral curd soap or a good coal-tar soap. After drying well, let the forehead be lightly dabbed over with the following lotion:—

Liq. hydrag. perchlor. B.P.	3i.
Aq. coloniensis	5i.

M.

158/22. *V. S.*—One grain of strychnine is a moderate dose for a horse. Tuson, in Veterinary Pharmacopœia, puts the dose at 1 to 3 grains for a horse.

143/70. *H. D.*—Thanks. We shall consider the matter.

150/37. *Otto*.—Pig-powder, on which pigs seem to fatten and thrive, consists principally of nitrate of potash, small quantities of black antimony, powdered nutmeg, and a trace of arsenic. We should not advise the use of arsenic, and think you will find the following in teaspoonful doses twice a week equally efficient and harmless:—Nitrate, black antimony, of each, $\frac{1}{2}$ oz.; powdered nutmeg, 1 drachm; and fennugreek, 2 oz.

Anonymous Inquiries received from *Pharmacist* (London, S.W.), *F. Z.* (Cardiff), *Camphor* (Hempstead), *Subscriber of C. & D.* (Durham), and *George* (Notts). Anonymity is a waste of postage.

Next Week.

Meetings, &c., to be held, and business to be transacted thereat. Suitable notices will be inserted in this section if received by the Editor on or before Wednesday.

WEDNESDAY, November 15.—*Royal Microscopical Society*, 20 Hanover Square, London, W., at 8 P.M. Mr. W. West, "New British Freshwater Algae." Mr. T. F. Smith, on the "Value of Aperture in Microscopical Research (with lantern)." Mr. G. Sandeman, "A Parasitic Disease in Flounders."

WEDNESDAY, November 15.—*Brighton Junior Association of Pharmacy*, at 9 P.M. Musical and social evening.

WEDNESDAY, November 15.—*Western Chemists' Association of London*. Annual Dinner at the Holborn Restaurant, at 7.30 P.M. Tickets, 5s. each, from Messrs. H. Cracknell, 17 Craven Road, W., and A. J. Phillips, 156 Cromwell Road, S.W.

WEDNESDAY, November 15.—*Society of Arts*, John Street, Adelphi, London, W.C. Opening address of the 140th session by Sir Richard E. Webster, Q.C., M.P., chairman of the Council, at 8 P.M.

THURSDAY, November 16.—*Chemists' Assistants' Association*. Annual conversazione, at the Portman Rooms, Baker Street, W., at 8 P.M. Tickets 3s. 6d. each, or 5s. 6d. for a pair.

THURSDAY, November 16.—*Chemical Society*, Burlington House, at 8 P.M. "The Normal Butyl, Heptyl, and Octyl Esters of Active Glyceric Acid," by Professor Percy Frankland, F.R.S., and John MacGregor, M.A. "The Etheral Salts of Diacetyl-glyceric Acid in their Relation to Optical Activity," by Professor Percy Frankland, F.R.S., and John MacGregor, M.A.; and other papers.

THURSDAY, November 16.—*Liverpool Pharmaceutical Students' Society*, at 8.30 P.M. Mr. Edwin Williams on "The Carbo-hydrates."

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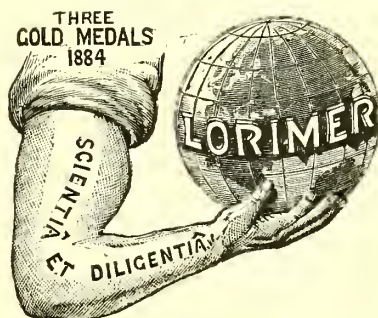
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SCHACHT'S SYR. CINCHONÆ ALCOHOLICUS.

A standard preparation, of definite alkaloidal strength, containing the entire medicinal properties of the finest Cinchona Bark. It is, in fact, *Bark minus the woody fibre*, and its efficiency has been proved by careful medical inquiry. Dose : Ten to sixty drops.

SCHACHT'S PEPSINA LIQUIDA (REGISTERED TITLE).

Fluid Pepsine of extraordinary activity—tasteless, odourless, attractive to patients, and reasonable in price. Every teaspoonful when tested by the official B.P. process is *guaranteed* to effect the solution of 1,000 grains of albumen. Peptic power is the only test of value. Most of the fetid and repulsive dry Pepsines have proved worthless. In 4 oz. bottles, 2s. 6d. each; and larger sizes, for dispensing, at a cheaper rate.

SCHACHT'S PEPSINA LIQUIDA C. BISMUTHO.

Each drachm contains in a concentrated form, besides the fluid Pepsine a full dose of Schacht's Liquor Bismuthi. Dose : One drachm. In $\frac{1}{2}$ lb. and 1 lb. bottles.

N.B.—Peps. Liq. c. Bismutho Co. contains, in addition, one grain soluble Euonymin in each drachm.

SCHACHT'S PEPSINA LIQUIDA C. EUONYMIN.

Each drachm contains one grain of soluble Euonymin. Dose : One drachm. For dispensing, $\frac{1}{2}$ lb. and 1 lb. bottles.

SCHACHT'S LIQ. PODOPHYLLI C. BISMUTHO.

A perfect solution of Podophyllin, containing $\frac{1}{2}$ grain in each drachm.

SCHACHT'S LIQUOR CASCARÆ DULCIS.

A pleasant and active form of Cascara Sagrada. Dose : One to three teaspoonfuls diluted. In 4 oz., $\frac{1}{2}$ lb., and 1 lb. bottles.

SCHACHT'S INFALLIBLE RENNET.

An entirely new Essence, perfectly reliable, for the coagulation of Milk and the production of Junkets and Curds and Whey. It is a preparation of the most wholesome nature, that contains *no salt*, and has *no* special taste, smell, or colour. In large bottles at 1s. of any Chemist. This Essence keeps well in any climate.

The above Preparations can be procured from Messrs. Barclay & Sons, W. Edwards & Son, and the Wholesale Druggists; or direct by post from

GILES, SCHACHT & CO., Clifton, Bristol.

MRS. WINSLOW'S SOOTHING SYRUP

FOR CHILDREN TEETHING.

Greatly facilitates the process of Teething, by softening the Gums, reducing all Inflammation; will allay ALL PAIN and spasmodic action, and is

SURE TO REGULATE THE BOWELS.

Depend upon it, Mothers, it will give rest to yourselves and

RELIEF & HEALTH TO YOUR INFANTS.

Mrs. WINSLOW'S SOOTHING SYRUP

Has been used for over Fifty Years by millions of Mothers for their children while Teething with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for diarrhoea

BROWN'S BRONCHIAL TROCHES

CURE COUGH, COLD, HOARSENESS, AND INFLUENZA. CURE ANY IRRITATION OR SORENESS OF THE THROAT.

RELIEVE THE HACKING COUGH IN CONSUMPTION. RELIEVE BRONCHITIS, ASTHMA, AND CATARRH.

CLEAR AND GIVE STRENGTH TO THE VOICE OF SINGERS, AND ARE INDISPENSABLE TO PUBLIC SPEAKERS.

SOOTHING AND SIMPLE, CHILDREN CAN USE THEM, AS THEY ASSIST EXPECTORATION AND RELIEVE HOARSENESS.

NOTICE. — Brown's Bronchial Troches are guaranteed to contain no Opium or other Poison.

London Office — 33 FARRINGDON ROAD.

THE MEXICAN HAIR RENEWER

Prevents the Hair from Falling Off. Restores Grey or White Hair to its ORIGINAL COLOUR.

Being delicately perfumed, it leaves no unpleasant odour.

IS NOT a Dye, and therefore does not stain the skin, or even white linen.

Should be in every house where a **HAIR RENEWER** is needed.

APPLY FOR WHOLESALE TERMS TO

THE ANGLO-AMERICAN DRUG COMPANY, LIM.

33 FARRINGDON ROAD, LONDON, E.C.

The Chemist & Druggist

SUPPLEMENT.

Businesses Wanted
Businesses for Disposal
Premises to Let
Auction Sales

SATURDAY, NOV. 11, 1893.

Partnerships
Situations Vacant
Situations Wanted
Miscellaneous

A Copy of this Supplement is inserted in every number issued of "The Chemist and Druggist."

PLEASE NOTE.

ADVERTISEMENTS for this Supplement must be received at the Office, 42 Cannon Street, E.C., not later than 5 o'clock on Thursday Evenings, for insertion in the current week's issue.

Advertisements must be prepaid. Remittances by post may be made in stamps, or by postal order made payable to "EDWARD HALSE," and crossed MARTIN'S BANK (LIMITED). To ensure prompt attention address all communications, endorsed "Supplement," to the PUBLISHER of "THE CHEMIST AND DRUGGIST."

A COPY of this Supplement is inserted in every number issued of THE CHEMIST AND DRUGGIST. The Supplement will be sent free by early post on Friday morning to any person connected with the trade who will send in advance a stamped addressed newspaper wrapper for it, or will be given to any applicant at the Office after 9 A.M. on Fridays.

The Circulation of THE CHEMIST AND DRUGGIST largely exceeds that of any Journal in the world in connection with the trade represented.

OFFICES: 42 CANNON STREET, LONDON, E.C.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding profitable opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£2,000.—LONDON (within easy distance of Victoria Station).—An old-established first-class Dispensing Business; returns over £2,000 yearly; offering ample scope for considerable extension; the premises are large and convenient, and the shop commanding and handsomely fitted; an immediate purchaser, with £1,000 at command, can be dealt with; full particulars on application.

2.—£600.—LONDON, S.W.—Dispensing and Retail; situate in a main road; well-fitted, attractive shop; returns, increasing yearly, £600; at low; small, convenient house; vendor having other engagements, desirous of meeting with an immediate purchaser, will accept a very low price.

3.—£500.—LONDON, N.E.—Dispensing and Retail; situate in a good middle-class locality; returns £500 yearly, increasing, profitable; the house is a good one, with garden attached; rent moderate; price about £450.

4.—£550.—LONDON, S.E.—(pretty suburban locality, within easy distance of the Crystal Palace).—Good-class Family trade, about £550 yearly; well-fitted shop and comfortable house, with good garden; price £500.

5.—£1,000.—LONDON, E.—Suburb. Old-established Dispensing and Retail; held by vendor many years; returns £1,000 yearly, all ready money; good profitable trade; comfortable house; price £950.

6.—£600.—LONDON, W.—Good-class Dispensing and Retail; situate in a main road; returns £600 yearly (ready-money); vendor is retiring from business; large and convenient house; worth the attention of a good business man; price about £600.

7.—£700.—LONDON, N.—Dispensing and Retail; with a speciality in Wholesale request; returns very profitable, £700 yearly; well-fitted shop and good stock; new lease; an early sale is wished for, and the vendor will be prepared to make an adequate reduction to effect this.

8.—£1,700.—SOUTH COAST.—Dispensing Business of first class; held by vendor 40 years, now retiring; returns £1,700; situation undeniably good; good house and business premises; price about £1,400; valuation of stock if wished.

9.—£1,500.—EASTERN COUNTIES.—Good-sized market town; returns £1,500 yearly; very good profits; large and convenient house; moderate rental; prominent position in market-place; valuation about £1,200.

10.—£700.—BIRMINGHAM.—Dispensing and Retail Business, in a good district for profitable work; returns £700; the shop has single front; good-sized, convenient house, private entrance; price about £450; good investment for a beginner.

11.—£1,200.—WILTS.—In an agricultural district, with no important opposition, an established business; returns £1,200 yearly; mixed trade; net profit £350; price £700.

12.—£700.—WALES, MON.—Death Vacancy.—Established and profitable Business; returns average £700 yearly; profits about £300; the business includes a large number of proprietary articles; 6-roomed house, rent £20; price for all about £300.

13.—£500.—WALES.—Dispensing and Retail under management; returns between £400 and £500 yearly; easily increased by personal attention; corner shop; about £200 wanted.

14.—£1,500.—CUMBERLAND.—Mixed Business, with Wines and Spirits; returns £1,500 yearly; profits £400 yearly; low rental; good-sized shop and convenient house; an immediate purchaser is required; a small sum will be accepted, say about £400; less than the value of stock and fixtures.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country. Particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London Agent.

SPECIAL NOTICE.—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale, suitable for Gentlemen with Small Capital, from £200 to £500.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,

VALUER, LEICESTER,

60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.
NO CHARGE TO BUYERS.

STOCKTAKING UNNECESSARY.—Stocktaking is always dreaded by Chemists, and with a competent Valuer is not necessary.

F. J. BRETT is prepared to estimate or to value entire stocks as they stand with little or no inconvenience to ordinary business, and has repeatedly done so with entire satisfaction to those adopting this mode.

STOCKS AND FIXTURES BOUGHT FOR CASH.

£1,500 returns.—**ESSEX.**—Good old Family Country Retail; profits good; price £1,000.

£1,050 returns.—**LANCS.**—Light Retail; good position of important town; price £600.

£450 returns.—**MANCHESTER SUBURB.**—Unopposed; one-half net profit; price £150.

£1,200 returns.—**WILTS.**—Good General Country Retail; price £700.

£580 returns.—**LINCS.**—Price £280; good house, garden, &c.

BERDOE & CO.,

CHEMISTS' TRANSFER AGENTS & VALUERS,

30 JEWRY STREET, ALDGATE, E.C.

Established 1870.

NOTICE TO VENDORS.

Having been for the past 22 years solely engaged in the Sale, Purchase, and Valuation of Chemists' Businesses, we have, as Transfer Agents and Valuers, the largest experience of any in the Trade. VENDORS placing their businesses in our hands for transfer may in all cases rely upon a speedy sale being effected without undue publicity. Terms forwarded post free on application. No sale, no charge.

BUSINESSES WANTED.

NO CHARGE TO PURCHASERS.

1.—**ESSEX.**—Unopposed Retail, Dispensing, and Agricultural Business; same hands 50 years; returns £1,530 under management; good house and garden; price £900; personally inspected.

2.—**WEST OF ENGLAND.**—Large Village Mixed, Retail, Dispensing, and Prescribing Business, with good Agricultural connection; returns over £1,200, increasing each year; price £700 or offer.

3.—**NORFOLK.**—Mixed Retail and Prescribing Business; returns £1,000; good profits; rent £20; good house; garden stocked; shop is well fitted and stocked; price £400, or offer, or by valuation.

4.—**LINCOLNSHIRE.**—Death vacancy; Retail and Prescribing Business; in same hands 30 years; returns £750; rent £26; good house and premises; price £500, or reasonable offer.

5.—**MIDLANDS.**—Unopposed Light Retail and Prescribing Business; returns £800; rent and taxes under £30; good house, garden stocked with fruit-trees; price £400, or offer.

6.—**SEASIDE.**—First-class Dispensing Business, doing a large and steadily-increasing business; elegantly fitted shop, heavily stocked; good house; price, £1,300; personally inspected.

7.—**BRISTOL.**—Suburb; Retail and Prescribing Business; in present hands many years; returns £418; net profit nearly £200; good house; price £200; bargain.

8.—**LONDON, N.**—Through ill-health, good-class Retail and Dispensing Business; returns £1,100; net profit £450; handsome corner shop; well stocked; business capable of increase; price £1,000.

9.—**LONDON, W.**—Retail and Dispensing Business, in main thoroughfare; returns £700; good prices obtained; well fitted and good stock; 8 rooms and garden; price £550, or offer.

10.—**LONDON, W.**—Good-class Retail and Dispensing Business; returns £1,215, at good prices; main road; low rent; good house; price £960; worth special attention.

Berdoe & Co., 30 Jewry Street, Aldgate, E.C.

ANDROS & CO.,

Chemists' Transfer Agents & Valuers,

67 SHIP STREET, BRIGHTON,

WEST RIDING OF YORKS. (Vol. 969).—General Light Retail Business; attractive corner; Pharmacy; convenient house; very low rent; returns £420; price £320.

HANTS. (Vol. 951).—Returns nearly £800; Dispensing, Agricultural, and Prescribing Business; large well-fitted shop; good house; rent £35; price £480.

SOUTH WALES (Vol. 948).—Market town; death vacancy; good-class Retail and Prescribing Business; low rent; net profits over £300 per annum; price £300.

LONDON, W. (Vol. 928).—Returns £450; Family Retail, Dispensing, and Prescribing Business; 10-roomed house in thorough repair; established 30 years; price £200; every investigation allowed.

LONDON, S.E. (Vol. 916).—Retail, Prescribing, and Dispensing Business; good house and Pharmacy; low rent; returns £250; price £160.

KENT (Vol. 941).—Returns over £400; Light Retail, Dispensing, and Prescribing Business; double-fronted shop; large house and garden; rent £40; price £350.

Messrs. Andros & Co. having a large selection of businesses for disposal in all parts, will be pleased to forward a list of same on receipt of requirements.

NO SALE NO CHARGE.

CROCKER & CO.

SOLE PROPRIETORS—

Mr. WILLIAM JUDD and Mr. ALFRED MANNERS,

Trade Valuers, Transfer Agents, and Accountants
15 WALBROOK, E.C.

Having numerous inquiries for good-class Country Businesses they invite communications from intending vendors.

NO CHARGE IS MADE UNLESS A SALE IS EFFECTED.

INLAND WATERING-PLACE.—A first-class Dispensing Business returning £2,000 a year; rent £100; price £1,700; strongly recommended.

LONDON, S.W.—A first-class Dispensing and Retail Business, returns at good prices £1,450, with a net profit of £450; price £1,300; good house; rent £60.

LONDON, S.E.—Good-class Family and Dispensing Business; returns £500; price £400; very handsome Pharmacy in select residential locality.

LONDON, N.—Main road; old-established cash Retail and Dispensing Business; fine bold commanding shop, beautifully fitted and well stocked; returns £1,450, very profitable; price £1,250.

CHESHIRE.—An old-established Retail and Dispensing Business, in best part of busy market town; returns £1,030; price £800, or valuation of stock and fixtures. This is well worth the attention of a pushing man, as there is great scope for improvement.

LONDON, S.E.—Old-established Prescribing and Retail Business, returning, under manager, about £250 a year; rent £28; price £150 or offer.

SOUTH COAST.—Old-established Mixed Retail Business, with P.O. attached, returning about £700, with good house, at low rent; price £400.

KENT.—Near London; a neglected Cash Retail and Prescribing trade; returns £7 weekly; formerly did £16; ill-health cause of sale; price £250.

HERTS.—Old-established good-class Family Business; returns nearly £650, and capable of great increase; good house and garden; price £450.

SOUTH COAST.—A first-class Dispensing and Retail Business, with handsome Pharmacy; situated in the best position of an important health resort; giving a net profit of £600 a year; price, £1,850.

WARWICKSHIRE.—Old-established Retail and Dispensing Business returning actually about £500, with good house; price £400.

LONDON, W.—Retail and Dispensing trade; returns £1,000; price £550; handsome pharmacy, well stocked; good position, main thoroughfare.

LONDON (Northern Suburb).—An excellent Family trade; returns £700; price £600; net profits very good.

LONDON, S.E.—Retail and Family Business, returning £400 a year with good house in best position of district; price £350; a bargain.

NO CHARGE TO PURCHASERS.

THOMAS TOMLINSON & SON,

Chemists' Transfer Agents and Valuers,

9 NEW CANNON STREET,
MANCHESTER.

BUSINESS WANTED.—Thomas Tomlinson & Son, having on their books an extensive list of gentlemen who have entrusted them with commissions to look up a good genuine Business, intending sellers can rely upon being at once, with all despatch, put into communication with *bona-fide* buyers without publicity and the annoyance of answering "curiosity" applications.

No charge made unless Sale is effected.

A THOROUGHLY GENUINE CONCERN.—Intending purchasers will do well to place their names with Thomas Tomlinson & Son, giving particulars of their desires, and they will forward them from time to time full particulars of any genuine Business that will be likely to suit them.

No charge made.

BUSINESSES FOR DISPOSAL.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

BATH.—Old-established Business; high-class trade at full prices; proprietor giving up through ill-health; full investigation invited; price £500; great bargain. Apply, Ham Deunhy & Butcher, Chartered Accountants, Bath.

INCREASING Business, in the Midlands; shop well fitted; rent £40; good house; returns about £1,200 (could be doubled); price £300; fittings at valuation. Apply, O. U., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMMEDIATE: good-class Country Business, with Seed trade; best situation in market town; average receipts about £400; satisfactory reasons for disposal; £150 to immediate purchaser, or valuation; good house. Apply "Opium," Evans, Sons & Co., Liverpool.

FOR Sale, a Chemist's Business, in a prosperous Yorkshire manufacturing town (population 23,000); Mixed business; principally Light Retail, including Prescribing and Dispensing; good position and premises (no house); to be sold at a valuation. Apply Hirst, Brooke & Hirst (Limited), Leeds.

SITUATIONS WANTED—Cont.

JUNIOR; 22; London experience; good references; disengaged. Speechly, Bishop Stortford, Herts.

ASSISTANT; outdoors preferred; references exceptional. W. Ream, The Elms, Long Sutton, Wisbech.

ASSISTANT, Manager, or Locum; London and Provincial experience. "Major," 85 Primrose Lane, Glossop.

JUNIOR; 20; disengaged; good references; London experience. "Statim," 74 Chapeltown Road, Leeds.

ASSISTANT; first-class experience; aged 24; disengaged November 28. G., 69 Long Row, Nottingham.

32/- WEEKLY.—Manager or Assistant; qualified; 50; married; 6 Wellington Road, Wrexham.

OUTDOORS; competent; disengaged; good Prescriber and Counter-man. W., 45 Curdon Road, Charlton.

ASSISTANT; Major qualification; 23½; good experience; disengaged; E. J. King, Wootton Bassett.

ASSISTANT; outdoor; 13 years' experience; disengaged. "Statim," 123 Wandsworth Bridge Road, Fulham.

EXPERIENCED Dispenser to Surgeons; at once; married. "Maddoe," 56 Jndol Street, King's Cross.

ASSISTANT or Dispenser; London; qualified; experienced; outdoors preferred. A. H., 113 Holborn, E.C.

HOSPITAL Dispenser; experienced; qualified; Tooth-extractor. "Dispenser," 55 Park Road, Barnsley, Yorks.

ASSISTANT; qualified (22); good references; disengaged. "Sumendus," 6 Victoria Parade, Scarborough.

ASSISTANT; qualified; 22½; tall; good references; London preferred; Howells, Pantglas, Treacastle, Brecon.

COMPETENT Assistant or Dispenser; in or outdoor; disengaged. Leo, 67 Grafton Street, Fitzroy Square, W.

IMPROVER; 19½; 5 ft. 8 in.; 3 years' experience; disengaged. State salary, &c., W. T. P., 35 Newgate Street, Morpeth.

MANAGER, Qualified; married; no family; thoroughly reliable; experienced. "Cooper," Church Street, Amptill.

JUNIOR; 24; outdoor preferred; first-class experience; London or near. "Opus," 5 Roxwell Road, Shepherd's Bush, W.

ASSISTANT; 7 years' experience; Midlands preferred; disengaged 23rd; aged 24. Chadwick, 27 High Street, Chelmsford.

ASSISTANT; Branch, &c.; experienced Dispenser; qualified; outdoor. Chemist, 5 Albany Road, Sittingbourne, Kent.

MANAGER; qualified; 42; 5 ft. 10 in.; all-round experience; well recommended; abstainer. "Civis," Hickman, Bridgewater.

JUNIOR; disengaged; 5 ft. 10 in.; good experience and address. "Statim," 34 Northway Road, Longboro Junction, London, S.E.

MANAGER; Branch; Lady or Locum-Tenens; 9 years last engagement, just completed. E. H. Cripps, Market Place, Devizes.

BRANCH Manager; experienced; first-class testimonials; married; no family. "Extractor," 110 Devonport Road, Shepherd's Bush, W.

ASSISTANT or Branch Manager; qualified; 27; single; best London experience; disengaged. "Mentha," 2 Troy Road, Upper Norwood.

PART-TIME; outdoor; morning and evening (except Thursday); all day Saturday. "Extractor," 87 George Street, Portman Square, W.

ASSISTANT; 25; for Mixed Retail, or to Travel for Wholesale. 93/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR; 19; outdoors; completed apprenticeship; good-class Dispensing; Leeds or district preferred. Simpson, Armley Heights, Leeds.

ASSISTANT in good-class business; Major; aged 24; 5½ years' experience. Apply, stating salary, &c., to W., The Manor, Church Fenton, Leeds.

ASSISTANT; experienced; Prescribes; Extracts; aged 35; married; non-qualified; abstainer; permanency. K., Oxford Road, Hay, R.S.O.

JUNIOR, or Dispenser to Surgeon; 23. Widdowson, 64 Great Portland Street, W.

JUNIOR; in London; aged 21. "George," 11 Grove Avenue, Wandsworth.

WET or Export; aged 23; good references. "Cascara," 150 Euston Road, N.W.

LONDON; part-time, aged 30; Prescriber. W., 23 Milson Road, West Kensington.

IMPROVER; 4 years' experience; aged 19; tall. "Drugs," 235 Gipsy Road, West Norwood.

LOCUM or permanent; disengaged; aged 27; good Extractor. 2 Horton Street, Lewisham, S.E.

ASSISTANT or Dispenser; 30; good references; 16 years' experience. H., 636 King's Road, Fulham, S.W.

RESPONSIBLE position in Wholesale; wide experience in all branches. "Nemo," 362 City Road, London.

DISPENSER. Medical, Retail, or Temporary; experienced; qualified; outdoors. "Chemist," 96 Tnnis Road, W.

MANAGER, Assistant, or Locum preferred; qualified; London. A. P. S. Avondale, Saltram Crescent, Paddington.

AS Locum-Tenens or Manager, by an Associate; excellent references; first-class experience. A. Court, 3 Whitehall Mansions, Archway Road, N.

DISPENSER, Surgeon's; quick, accurate; tall; good appearance, address; aged 23; references. D., 52 Ivanhoe Road, Denmark, Park, S.E.

AS Assistant; good Dispenser and Counterman, Tooth-extractor, Prescriber, &c. "Phenactine," Pear Tree Lodge, Calbourne, Isle of Wight.

DISPENSERSHIP by Minor man; London only; outdoor; good experience and references. "Phenazone," 72 Westminster Bridge Road, S.E.

AS Dispenser or Junior; 21; abstainer; Liverpool or suburbs preferred. Apply "Tarax," 6 Parliament Place, Parliament Street, Liverpool.

ASSISTANT; 22; 6 years' London and provincial experience. "Chemist," c/o W. Sutton, B.A., Charlotte House, Carey Place, Watford.

ASSISTANT; Minor and Hall qualifications; outdoors; London and country experience. "Chemist," 85 Derringham Street, Spring Bank, Hull.

WHOLESALE; Laboratory experience; Wet counter preferred; aged 22; 5 years' reference. "Drugs," 139 Wellfield Road, Streatham, S.W.

ASSISTANT; Hall qualification; 28; best experience; in or outdoors; London not essential. "Instantur," 4 Robert Street, Cheadland, Manchester.

ASSISTANT or Branch Manager; unqualified; experienced; 7 years' Retail (4 Wholesale, Allen & Hanburys); disengaged. Lawrence, 3 Elm Terrace, Leytonstone.

ASSISTANT, good experience; Prescriber and Extractor; knowledge photography; good counter hand; disengaged. Address, "Cortex," 24 Bath Street, Hulme, Manchester.

MANAGER, permanent or temporary; qualified; 41; 5 ft. 11 in.; special all-round experience; good book-keeper; abstainer. "Chemist," 92A Belle Vue, Shrewsbury.

WANTED by well-educated Youth (22), good appearance and experience, situation Junior. 93/11, Office of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR; in good class Business; 5 years' experience; excellent references; disengaged November 21; Sheffield district preferred. Wilcockson, 47 High Street, Newcastle, Staffs.

MANAGER; married; 42; Pharmaceutical Chemist examination; London suburbs preferred; good Prescriber. 53/17, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS Assistant to Chemist or Surgeon (Dispenser); aged 32; Minor; City and suburban experience; outdoors preferred, but not necessarily; disengaged. "Storax," 52 Trinity Square, Borough, S.E.

LOCUM-TENENS or Manager; qualified (Major); indoors or out; good Prescriber; first-class Dispensing and pushing Retail; Extractor, &c. "Pharmacist," c/o Mr. Booth, 41 Moorgate Street.

ASSISTANT seeks engagement, early in December, in Laboratory of Wholesale or Manufacturing Chemists; Minor qualification "Ebor," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS OPEN.

3s. 6d. for 50 words; 6d. for every 10 words beyond.

IMMEDIATE, qualified Assistant for Branch. Fuller & Co., Norwich.**B**ARNES & CO., York, require an Assistant for quick Dispensing and Light Retail.**W**ANTED, immediately, an Improver for Light Country trade. Wilkinsou, Colne.**J**UNIOR wanted (outdoors) for a brisk business; hours moderate. Apply, 509 New Cross Road.**P**ILL Makers wanted. Apply by letter only, stating experience and wages wanted, to H. & T. Kirby & Co., 14 Newman Street.**W**ANTED, immediately a good Junior; one able to Extract Teeth preferred. John Routly, 83 South Street, Eastbourne.**W**ANTED, Manager, for Branch; qualified; quiet country town; abstainer. State salary, age, &c., references, to Townley, Keswick.**S**ITUATION in small, reliable, Retail and Dispensing, with view to early succession. Apply, with full particulars, to W. F., Osborne House, Atherstone.**M**UNRO & CO., 273 Regent Street, have a vacancy for a competent Assistant; indoors; aged about 24; must be a good Dispenser. Apply, with usual particulars.**W**ANTED, the beginning of December, an Assistant, about 22 years of age, well used to Dispensing. Apply, giving full particulars, to E. Silk, Teignmouth, South Devon.**W**ANTED in about a week's time, a Senior Assistant; indoors; aged from 27 to 35; Tooth-extractor preferred; salary £65 per annum. Apply to Reece & Co., 53 Great Marylebone Street, W.**W**ANTED, a qualified Assistant, to work up an old-established business; outdoors; partial board; good references required; a Norfolk man preferred. Fitch & Chambers, Market Place, Norwich.**T**RAVELLER wanted, calling on Chemists and Drug-stores, to handle selling Spécialité; only good men already in employment need address "Novelty," Messrs. Deacon's, Leadenhall Street, E.C.**W**ANTED, qualified Assistant, also Junior, for brisk, Mixed Country business. State age, experience, salary required (indoors), and send photo (to be returned), to Richardson, Chemist, Hatfield, near Manchester.**W**ANTED, early in December, Junior Assistant; must be accustomed to good-class trade, and be a reliable Dispenser; indoor situation; hours moderate. Please state age, height, and salary required, to S. J. Coley, Chemist, Stroud.**A**SSISTANT wanted for a good-class Retail and Dispensing business; one with some knowledge of photo material preferred; not under 22. Apply, with usual particulars, and photo (to be returned) to Jarvis, Chemist, Handsworth, Birmingham.**A** QUALIFIED Assistant; aged 23 to 26; one with a general knowledge of trade, Prescribing, Tooth-extracting, and seeking a permanent situation preferred. Apply, stating reference, and salary (indoors) required, to Hugh Fairhurst & Co., Pharmaceutical Chemists, Warrington.**A**SSISTANT to manage Branch in South Wales; must be a smart pushing business man, and have had good experience in both Shipping and Family trade. State age, height, salary required (in or out doors), and enclose carte, to 96/23, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**W**ANTED, an Assistant of good experience, about 22; one quick and good at counter preferred; the usual early evening per week, and half a holiday each month; Sunday duty every fourth Sunday. Full particulars, with references, salary required, &c., to Blackham, 675 Holloway Road, Upper Holloway, N.**W**ANTED, at the West-end, Youth as Improver, or Turnover Apprentice, of a year or two experience; indoors, but no salary for first 6 months. Replies, stating age, height, and how long in the business, to W. C. & Co., c/o Messrs. Sanger & Sons, 2 Winsley Street, Oxford Street, W. Must have passed Preliminary.**A** GENTLEMANLY, active Assistant, about 22 or 24, for a Light Country business; must be a good Counterman; qualified man preferred; indoors; comfortable home, weekly half-holiday. Give usual particulars and references, and enclose photo, Edmund Jones (formerly with John Bell & Co.), Chemist, Hanley.**A**SSISTANT required for good-class pushing Cash trade; energetic, trustworthy, and competent, and a good Salesman; outdoors and no Sunday duty; liberal terms and permanency to suitable man. State salary required, particulars of last two appointments, and all customary information, to Timothy White, Chemist, Portsmouth.**M**ANAGER, not more than 33, married, for quick trade in populous locality. A qualified man of suitable experience, not afraid of work, and wishing to acquire a business, may apply to "Tolu," 125 Shirlaud Road, Maidla Vale.**J**UNIOR Assistant for Light Retail and Dispensing business (W.); enclose photo (which will be returned), with usual particulars, or please write, appointing interview. Address T. Linay, 2 Fernhead Road, St. Peter's Park, London, W.**W**ANTED, a Managing Assistant, must be a good and neat Dispenser, either with view to succession or partnership, in a quiet Retail and Dispensing business; reliable and steady. Apply, by letter, W. P., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**W**ANTED, thoroughly practical certified Chemist, young, of good address, and well educated; one with experience in manufacture of Disinfectant and Sheep-dip preferred. Reply, stating fully past experience, where last employed, salary expected, &c., to "Delta," c/o General Post Office, Belfast.**S**OUTH AFRICA.—Wanted, Manager of Dispensary; steady young married man; qualified. Also wanted, a qualified Assistant; single. Apply, with photo, testimonials and all particulars, stating age, qualifications, and salary required, "M." c/o Davis & Soper, 6 Great Winchester Street, London, E.C.**W**ANTED, a qualified Assistant (Minor) for Prescribing and Retail business; small town; Extractor preferred; short hours; no Sunday work. State salary required (outdoors or indoors) and send photo and references to 88/19, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C. Letters not answered in 3 days declined.**S**ENIOR Assistant, about 28, required; accustomed to quick business, and capable of taking management; one seeking long engagement preferred; first-class testimonials as to trustworthiness and ability will be necessary. Apply, with photo and fullest particulars, stating salary required (outdoors), Mr. Valentine, 52 Upper Mall, Hammersmiths.

TAUNTON AND SOMERSET HOSPITAL.

QUALIFIED Dispenser Wanted; salary £100; the Dispenser will be required to give his whole time, and take over an Apprentice; aged not over 40.

Applications and Testimonials to be sent on or before the 18th instant, to the undersigned,

Dated 13 Hammett St., Taunton,
November 6, 1893,J. H. BIDDULPH PINCHARD,
Secretary.

SITUATIONS WANTED.

1s. for 12 words; 6d. for every 6 words beyond.

LOCUM-TENENS. W. Provost, 9 Castlegate, Grantham.**C.** LEAR; Locum-tenens; qualified. 13 Air Street, Regent Street, W.**Q**UALIFIED; 25; good experience. O., Barnsole Villa, Gillingham, Kent.**A**S Manager; 32; highest references. "Minor," 8 East Street, Plymouth.**A**SSISTANT; qualified; Branch or otherwise; in or out. M., 35 Mill Street, Hereford.**B**RANCH Manager; Assistant, experienced; aged 30. Moffat, 16 Deansgate, Manchester.**O**UTDOOR Assistant with Surgeon or Chemist. "Alpha," 3 Villa Road, Brixton, S.W.**D**ISPENSER to Surgeons; 9 years' experience; disengaged. Baker, 20 Marsland Road, S.E.**A**SSISTANT; good-class business; 24½; disengaged. F. H. Slyn, Stafford House, Rhyl.**J**UNIOR; 22; tall; outdoors; disengaged; good references. C. Lowe, High Street, Worcester.**L**OCUM, Traveller, Manager, or Dispenser to Surgeons, &c. "Alpha," Morgan, Chemist, Hereford.**A**SSISTANT; unqualified; aged 28; 12 years' experience. "Compo," 19 Middle Street, Worcester.**A**S Manager or Assistant; qualified; 24; disengaged. Wilson, 131 County Road, Walton, Liverpool.**W**HOLESALE.—Young man, 5 years' experience in managing small Wholesale business, dealing chiefly with medical men, is open for engagement, either as traveller, or in office or instrument room. Address, 93/19, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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LIGHT Retail, S.E.; £6 to £7 weekly; could be more than doubled; now under manager, improving; premiums for stock, fixtures, lease (10 years to run), £200; well-fitted good shop; no near opposition; small house of 7 rooms; suit a bachelor or man with small family. Address, "Poplons," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£1275.—Dispensing and first-class Retail, with well-known specialties, in a healthy suburb; good prices except patents; the principal having another engagement will accept a reasonable offer; references required and given; good house and gardens. Address, "Quabit," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

HANDSOMELY-FITTED Pharmacy; good class trade; very profitable; of most commanding appearance; best position in a town of 33,000 population; established 4 years; returning between £800 and £900, increasing; thoroughly genuine; satisfactory reason given for selling, quite unconnected with the business; no agents need apply. Address, "Borax," Horncastle's, 61 Cheapside.

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CHEMIST'S Business on border of E.C. District; pretty shop, well fitted and stocked; plate-glass front; lease 16 years; 8-roomed house; rent £45; profitable returns, at present about £7 weekly, steadily increasing, under management and good scope for large development; lowest price 250 guineas. For further particulars, Garman Bros., 278 Roman Road, Bow, E.

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WANTED, a Light Retail and Dispensing Business, returning about £300. Apply, with full particulars, "Gentian," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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WANTED, a good-class Dispensing and Retail Business in the Midlands or Western counties; partnership not objected to in good concern; no agents. "Radix," 74 Highgate Road, Sparkbrook, Birmingham.

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WHOLESALE.—Chemist having moderate capital, and possessing good qualifications and practical experience in manufacturing, is desirous of a Partnership. Address replies, which will be regarded in strict confidence, to 91/10, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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APPRENTICE.—Vacancy for a well-educated, gentlemanly Youth in a good class dispensing business; comfortable home; every opportunity for learning the business thoroughly. W. Pitchford, 54 Cotham Hill, Cotham, Bristol.

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APPRENTICES. I. Asbury, Dispensing Chemist, Matlock, Derbyshire, has vacancies for two gentlemanly Youths as Apprentices, one indoors and the other outdoors; light hours; no heavy trade; excellent opportunity for thoroughly learning the dispensing and retail trade. Particulars on application.

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ASSISTANT; whole or part time; quick at counter; general experience, including Photography; Stores preferred; unqualified; married. Reeve, 97 Denmark Road, Camberwell, S.E.

CHEMISTS, &c.: 28 years' experience; Extractor; proprietor preparations years running; married; moderate salary. Address, G. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER, good address and large all-round experience, desires engagement; has good provincial connection; highest references. 95/11, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JANUARY next; by Pharmaceutical Chemist Exam.; permanent or temporary; West of England or South Midlands preferred. 93/25, Office of the CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

A YOUNG Frenchman desirous of learning English, seeks employment in a Wholesale Druggist's office, or a good Pharmacy in London or Provinces, and would give his services gratis. Address, B. Z., 65 Fenchurch Street, E.C.

CHEMISTS Widow desires situation; Invalid Attendant, Companion, Help, Housekeeper, or any place of trust; if light duties and good home no salary first six months. M. E., c/o Matthews, Pharmaceutical Chemist, 326 Keutish Town Road, N.W.

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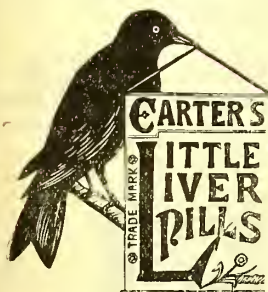
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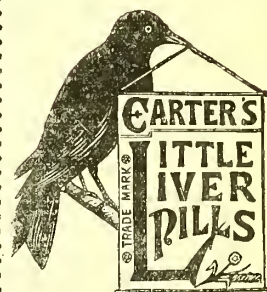


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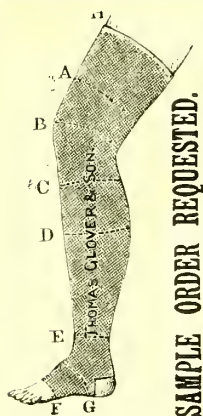
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UNSOLICITED LETTER FROM A CHEMIST.

To E. BREFFIT & CO. (LIM.), 83 Upper Thames Street, London.

38 High Street, Old Aberdeen, June 12, 1893.

Gentlemen,—Enclosed please find Cheque £20 12s. 8d. I may say I am exceedingly well pleased with my SHOP ROUNDS, both as regards Bottles and Labels. You will have another order soon, I think.

Yours truly,
H. MILNE.

HAND-MADE WHITE GLASS SHOP ROUNDS.

COMPARE OUR PRICES.	SIZES		2dr	½	1	1½	2	3	4	6	8	10	12	16	20	24	30	32	40	60	80 oz.
	UNSTOPPERED, NARROW or WIDE.		7d.	7d.	9d.	9d.	11d.	1/3	1/4	1/9	2/	2/3	2/6	2/9	3/3	3/6	4/	4/	5/	6/3	8/6
	NARROW, GROUND GLASS STOPPERED.		1/3	1/5	1/6	1/9	1/9	2/	2/3	2/8	3/6	3/9	4/	4/6	5/3	5/6	5/9	5/9	6/9	8/	10/6
	WIDE, GROUND GLASS STOPPERED.		1/6	1/9	1/10	2/	2/	2/3	2/8	3/3	4/	4/3	4/6	5/3	5/9	6/	6/3	6/3	7/3	9/	11/

SEND TRIAL ORDER.

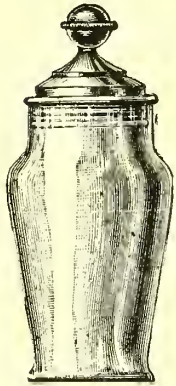
PRICES PER DOZEN, NET CASH, DELIVERED FREE, LONDON.

GOLD LABELLING on above, 3/- per dozen.

ENGRAVED LABELS on above, 4/6 per dozen.

SEND FOR OUR ILLUSTRATED PRICE LIST.

OFFICES AND SHOWROOMS, 83 UPPER THAMES STREET, LONDON, E.C.



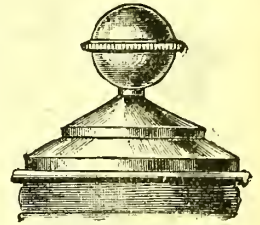
NEW PATENT AIR-TIGHT CHEMIST JAR.

A slight turn of the knob presses the indiarubber Band against the glass, and renders the vessel absolutely air-tight. The Stopper is made of pure Nickel, of handsome shape.

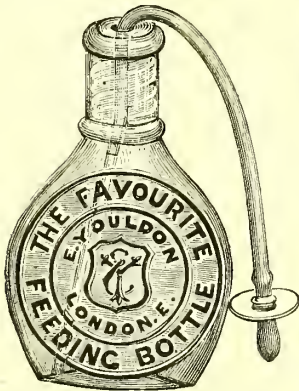
INVALUABLE FOR SHOW BOTTLES, CHEMISTS, CONFECTIONERS, &c.

Samples and Prices of all Chemists' Sundriesmen.

C. MELIN, [2]
37 CRUTCHED FRIARS, MARK LANE, E.C.



Section of the Nickel Stopper when closed.



GLASS BOTTLES

OF EVERY DESCRIPTION.

Revised Price List on Application.

FEEDING BOTTLES AT LOW RATES.

Write for Prices of any kind of Bottle required to

E. YOULDON,

East London Glass Bottle Warehouse,
36, 38, & 40 GREAT GARDEN STREET, WHITECHAPEL, LONDON, E.

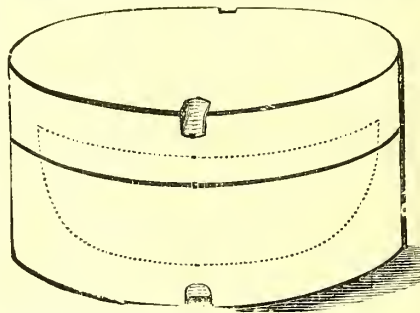


WILLIAM TOOGOOD.

TOOGOOD'S
IMPROVED PATENT

EARTHENWARE COVERED POTS

Are claimed to be the most
perfect and convenient yet offered to
the Trade.



ORDINARY THICKNESS—

1 dr.	2 dr.	4	8	1	1 1/2	2	3	4	6	8 ounces.
1/6	1/6	1/6	1/8	1/10	2/-	2/3	2/10	3/6	4/6	5/6 per doz.

THIN FOR DISPENSING—

1/7	1/9	2/-	2/2	2/5	3/-	4/-	5/-	8 ounces.
								6/- per doz.

Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.

These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.

TOOGOOD'S BATHING CAPS. Write for New Season's List.

TOOGOOD'S SPONGE BAGS. Write for New Season's List.

TOOGOOD'S FLESH GLOVES. Write for New Season's List.

TOOGOOD'S FEEDING BOTTLES. Write for Special List.

BURLINGTON BUILDINGS, HEDDON ST., REGENT STREET, LONDON, W.

GLASS BOTTLES

GOOD AND CHEAP.

From Stock
in London or
direct from
the works.

THE NEW SHAPE FLATS,
With rounded edges, or the ordinary kind, plain or graduated.
3 and 4 ounce 8/- per gross.
6 and 8 9/-

WHITE MOULDED PHIALS.
1 oz. 1 oz. 1½ oz. 2 oz.
3/6 .. 3/9 .. 4/6 .. 5/3 per gross.

PANEL BOTTLES.
2 oz. 4 oz. 6 oz. 8 oz.
7/- .. 8/- .. 9/- .. 9/- per gross.

SPECIAL NOTICE.—Six gross and upwards of assorted sizes sent Carriage Free to any part of England. Smaller quantities not carriage paid. Sample Bottle sent free on application.

I. ISAACS & CO., GLASS BOTTLE MANUFACTURERS,
Francis St., Tottenham Court Road, LONDON, W.C.
Established 50 Years Bankers—London and Westminster Bank.

THE ISLINGTON GLASS BOTTLE CO.

153 Upper Thames St., City, London, E.C.

Are now supplying very superior quality round edge

DISPENSING BOTTLES

At the following low prices:—

3 and 4 ounce 8/- per gross.
6 " 8 " 9/- "
12 " 12/- "

PLAIN OR GRADUATED.

A Sample Bottle forwarded on application.

Six gross of assorted sizes are sent, carriage paid, to any Chemist in England; smaller quantities not carriage paid.

Bankers—LONDON AND WESTMINSTER BANK.

ESTABLISHED UPWARDS OF 50 YEARS.

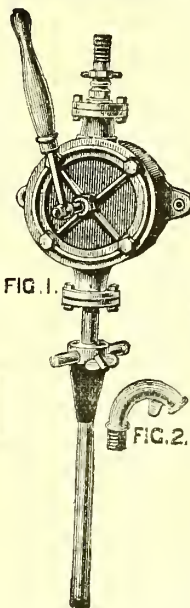


FIG. 1.



FIG. 2.

BUY THE BEST OIL PUMP

AND SAVE

OIL, TIME, MONEY.

THOUSANDS IN USE.

We have bought the Stock of these Pumps from

MESSRS. PONTIFEX & WOOD

SHOE LANE, LONDON.

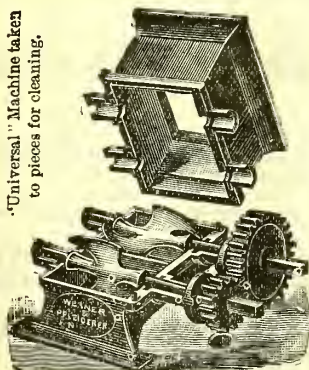
Who have given up this part of their business, and it is our intention to continue same.

We hold a Good Stock, and can give Prompt Delivery.

Write for full particulars and prices of The "Farrington Patent Oil Pumps to

W. H. WILLCOX & CO.
34 & 36 Southwark Street,
LONDON. S.E.

"Universal" Machine taken to pieces for cleaning.



Size 3, Type I., for 1-lb. Mass.

THE "UNIVERSAL" Kneading & Mixing Machine, PILL MASSING MACHINES.

Used by all the largest Pill Makers.

SUITABLE ALSO FOR

ointments, POWDERS,
AND MASSES
of any
Consistency.

PILL
PIPERS,

CUTTERS,

ROUNDERS, COATERS,

"SPIRAL BRUSH"

POWDER-SIFTERS

(WITH INTERCHANGEABLE SIEVES),

AND EVERY ACCESSORY FOR THE PILL ROOM.

WERNER, PFLEIDERER & PERKINS (LIMITED),

43 Regent Square, GRAY'S INN ROAD, W.C.

SHOWROOMS:—117 QUEEN VICTORIA STREET, E.C.

Contractors to the War Offices of all the Great Powers & other Governments.

Telephone No. 1365.

Telegraphic Address—"FISH LONDON."

THE BEST BOTTLES.

DEAR SIR,

If you want to replenish your Stock, } Send an
If you want a New Shape Bottle, } inquiry to

Yours faithfully,

JOHNSEN & JÖRGENSEN.



GLASS
BOTTLE
Manufacturers

5 Savage Gardens
Tower Hill, LONDON E.C.

BLAUD'S PILLS (Best Quality, Soluble Coating).

10-gross Tins, carriage paid, for 4/6. Cash with order.
7-lb Tins (56 gross), carriage paid, for 21/- Cash with order.

COMP. SULPH. LOZ. (Garrod's Formula) & TABLETS.

4 lbs., carriage paid, for 4/-. Cash with order.
7 lbs., carriage paid, for 6/6. Cash with order.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

JAMES N. DAVIDSON & GRAY, CHEMISTS, DUNDEE.

COFFEE.**THE "ORIGINAL CANISTER" & ROASTED COFFEES**

These Coffees have been before the Public for nearly 50 years,
and are the very best of their kind.

WHITE, FAIRCHILD & CO., 30 Gt. Tower St., E.C.

ESTABLISHED 1847. AGENTS WANTED.

**BLAIR'S
GOUT & RHEUMATIC PILLS**

Cure Gout, Rheumatism, Sciatica, Lumbago, Neuralgia.

The **Excruciating Pain** is quickly relieved, and cured in a few days, by these celebrated Pills, well known as the **Great Remedy** for the above Complaints. **NO POISONOUS INGREDIENTS.**

CINCHONA BARK & CRUDE DRUGS.

SPECIALITIES OF

FREDK. GRAF,

DRUG MERCHANT,

65 FENCHURCH STREET, LONDON, E.C.

PRICES AND SAMPLES ON APPLICATION.

S.V.R. In 40-gallon returnable iron casks, pure tinned, with screw bungs, interchangeable brass taps and spanners for opening. Farina, Dextrine, Glucose, Alcohol absolut., Fusel Oil, Pear Oil, Lime-Soda-Lead-Acetates, Verdigris, Acetic Acid, Wood Naphtha, Charcoal, Ammonia liquid 880-900, anhydrous Sodium Sulphide, Bromides, Iodides, Chlorhydrate, Boracic Acid, Sulphate of Copper, Permanganate of Potash, Ol. Caryophyll., Menth. Pip., Pinl., Juniperi.

HUGO LORENZ, 7, 8 Idol Lane, LONDON, E.C.

See also page 114, March 18 Issue.

**EVERY CHEMIST
SHOULD STOCK**

HEALD'S DOG MEDICINES.

They command a ready sale everywhere.

Address—**HEALD, BURNHAM, BUCKS.**

IT WILL COST NOTHING

Our Export List mailed free to
Buyers abroad.

FLETCHER, FLETCHER & STEVENSON,
21 MINCING LANE,
LONDON, E.C.

HAND-PICKED GUM ARABIC.

Wholesale and Export Druggists before buying elsewhere
should apply to

FREDK. FINK & CO.

10 & 11 MINCING LANE, LONDON, E.C. [2]

**PRECIPITATED CHALK, WHITEST
PUREST.**

CHEAPEST SELLERS IN THE MARKET.

ALSO CHEMICALS, DRUGS, AND OILS.

APPLY TO

AUG. LEVERMORE & CO., 8 LIME STREET, LONDON, E.C.

OXONIA

The New Lotion for Rodent Ulcer, Cancer of Tongue, Lips,
Lupus, Ringworm, Varicose Veins, &c.

Retail, 2/9 per Bottle. Trade, 23/- per dozen, subject.

THOMAS CHRISTY & CO., 25 Lime Street, LONDON, E.C.

NESS & COMPANY, DARLINGTON.

Old-established Manufacturers and Exporters of Insecticidal, Disinfectant,
and Deodorising Preparations (Three Gold Medals for Excellence).

Will send to any address Particulars and Samples of their Powerful

SHEEP DIPS AND DISINFECTANTS.

World's Fair, Chicago, Stand 293, British Section,
Manufactures Building.

DENTISTRY.

First-class Mechanical work undertaken for the
Profession at very low charges. Satisfaction
guaranteed.

PRICE LISTS FREE.

A. J. BROWNING, 104 NEWLAND, LINCOLN.

FIRST EXTRACT**LEMON OIL,**

Absolutely pure. Nothing finer imported.

C.i.f. Hull, London, or Liverpool, delivered as required up to December, 1893.
Special quotations for contracts up to December, 1894.

**MARK LEWIG, 23 Old Corn Exchange, MANCHESTER, and
in LIVERPOOL and LONDON.**

DIRECT AGENT FOR LARGEST CONTINENTAL HOUSES.

DRUGGISTS' SUNDRY GOODS.**HEATH BROS.,**

27 BLACKFRIARS STREET, MANCHESTER,

Being cash buyers can offer all lines at the very lowest prices.
WRITE FOR QUOTATIONS.

*Bromley's Gout
& Rheumatic Pills*

**46 Sir Thomas's Buildings, Liverpool, Eng.
WILL CURE YOU.**

1 1½ or 2/9
from
Chemists.

15 or 35
Stamps
by
return post.



E. H. THIELLAY'S (Registered 1867)

EUCALYPTIA.

From "Eucalyptus Globulus." An authentic reagent of the hair, instantly stopping its falling off, and is invaluable for hairdressing; a safeguard in epidemic times, protecting surrounding the respiratory functions from malarious and vitiated emanations. In Bottles at 2/6, 3/6, 4/6, 7/-, 10/-, &c.

All Wholesale Houses, or direct from

E. H. THIELLAY

Parfumeur-Chimiste, Amersham Park, New Cross, LONDON.
(SHOW ROOMS AT CHARING CROSS HOTEL.) [2]

WEST AUSTRALIAN DISTILLERY COMPY'S
OLEUM SANTALI OPT.

IS THE CHEAPEST PURE OIL ON THE MARKET.

Wholesale only.

SALE AGENTS:—SAML^l LAMBERT & CO.,
 132 FENCHURCH STREET, LONDON.

A1 TINS 1d. SIZE } FOR OINTMENT,
 also B1 2d. „ } **Tooth Powder, &c.**

Plain or with Stock Embossing "Pet. Jelly," "Zinc Oint.," &c.
 THE BEST AND CHEAPEST IN THE TRADE.

To be had of all Druggists' Sundriesmen.

A1—1½ x 1½

APPLY FOR SAMPLES.

B1—1½ x 1½

PUSH ————— **GETS THE BUSINESS!!**
RICHARDS & BERT

ARE THE FIRM FOR
BOTANIC DRUGS, SEEDS, PERFUMERY, ESSENTIAL
OILS, ETC., ETC.

SEND FOR PRICE LISTS.

16 Laurence Pountney Lane, Cannon Street, E.C.

TO LET.

CHOLERA ! ! ! !
ESSENCE AND PILULES OF
PER 3/6 DOZ. CAMPHOR
 (DR. RUBIN).

ONE SHILLING SIZE.

Order Immediately from **WATSON & WATES**, 93 Leadenhall Street, LONDON, E.C.

Daily Telegraph, Saturday, August 27, 1892:—

"1. If you suspect the case is one of cholera, send for doctor. 2. Give four-drop doses of *Essence of Camphor* every ten minutes for an hour, until there is some improvement. If you have not the *Essence*, use *Camphor Pilules*."

ESTABLISHED 1833.
HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the **ORIGINAL** and only **GENUINE BLISTER.**

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 57 years.

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And by all Chemists, in Pots, 1/6, 2/9, 5/-, 9/-, and 16/-.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNFEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

W. H. JAMES, SOLE MANUFACTURER, FARINGDON, BERKS.
 Advertised in "Bell's Life" 54 years. Beware of Spurious Imitations.

WILEY'S
CHEMICAL
ESSENCE
 FOR
LAMENESS in HORSES

A Genuine Remedy. Brings credit to all who sell it.

50 YEARS' UNBROKEN SUCCESS

SOLE MAKER AND PROPRIETOR,

FRANCIS E. ROOKLEDGE, CHEMIST,
EASINGWOLD, YORK.

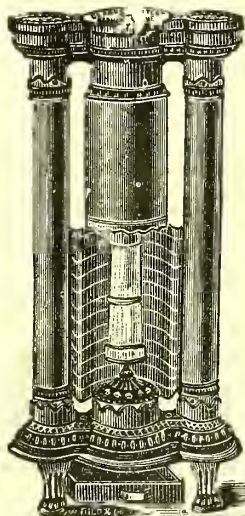
TO BE HAD OF USUAL WHOLESALE HOUSES

TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF
"THE SYPHON" (REGISTERED TITLE) **HYGIENIC CONDENSING GAS HEATING-STOVES**
 (CLARK'S PATENT).

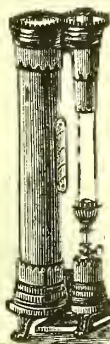
A Necessary for all Invalids. A Comfort to Everybody.

NO FLUE REQUIRED. FREE FROM SMELL OR SMOKE.



All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.

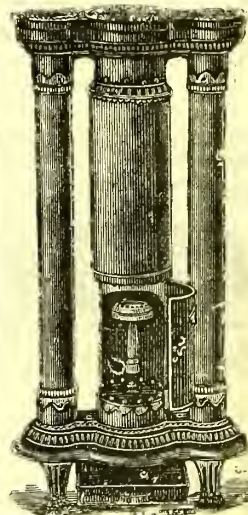
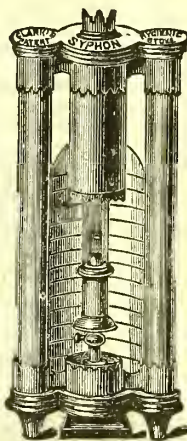
*For use in Hospitals, Sick Chambers, Bedrooms,
Halls, Conservatories, Schools, Shops, &c.*



They give a Pure, Equable, and Agreeable Heat, which can be graduated and sustained at the will of the user.

Specially suitable for patients suffering from Bronchial affections, as a moist atmosphere is obtainable when required.

For Terms, Particulars, and Prices, apply to



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Telegraphic Address—"SYPHON STOVES LONDON." Wholesale Agents—Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.C.

WILLIAM BURTON & SONS, BETHNAL GREEN, LONDON.

Hydrogen Peroxide, Indigo Extract, Soluble Indigo Powder Orchil, Cudbear, Logwood Extract, Fustic Extract, Aniline Dyes, Fine Lakes for Lithographic Inks, Vermilionettes, Drysalteries.

Sole Agents in United Kingdom and Colonies, excepting Canada, for

The New Bleach, **SODIUM PEROXIDE** (Aluminium Co., Ltd.).

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKLEY & SONS,

MANUFACTURERS OF

Glass and Flint Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKLEY'S WELLINGTON KNIFE POLISH

Prepared expressly for Oakley's and other Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

OAKLEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S "POLYBRILLIANT" (REGISTERED).

A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Paste. Tins, 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.

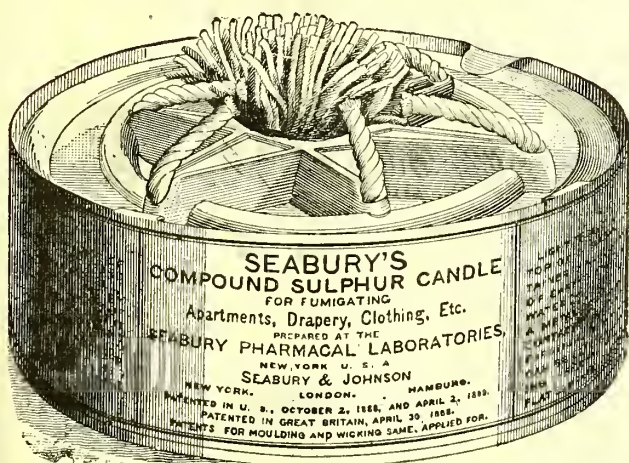
Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1883. Gold Medal, Crystal Palace, 1884.

IMPORTANT.—*Seabury's are the original and only genuine SULPHUR CANDLES, and are incomparably superior to all other articles of the kind.*

Seabury's Sulphur Candles

are the safest, surest, and most convenient form in which Sulphur can be burned indoors, for

DISINFECTION BY FUMIGATION.




Seabury's Sulphur Candles

are now very generally adopted by Boards of Health in England and America. Used to fumigate the ROYAL COURTS OF JUSTICE, Committee Rooms of the HOUSES OF PARLIAMENT, WAR OFFICE, etc., etc.

TO THE TRADE.

SEABURY'S SULPHUR CANDLES, which are now being extensively advertised to the Medical Profession, are recognised as the Standard Article, and their sale is being pushed with energy. Chemists should, therefore, always keep them in stock.

SEABURY'S SULPHUR CANDLES may be ordered through any Wholesale House, but it is important to specify Seabury's, as in many cases mistakes have been reported.

 Medical men are everywhere ordering SEABURY'S SULPHUR CANDLES (which burn readily and safely) as the most reliable means of disinfection extant after

Diphtheria Scarlet Fever Small Pox
Typhoid Fever and other Infectious Diseases

HAVE THEM IN STOCK TO SUPPLY THE GREAT DEMAND CONSEQUENT ON THE PREVAILING EPIDEMICS.

FASSETT & JOHNSON, Sole Representatives of

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TELEGRAPHIC ADDRESS—
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ESTABLISHED 1833.

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BAISS BROTHERS & CO.

WHOLESALE & EXPORT DRUGGISTS
AND
MANUFACTURING CHEMISTS.

MAKERS OF

CONCENTRATED LIQUORS

SOLID AND LIQUID EXTRACTS, B.P. & U.S.P.,

And all Pharmaceutical Preparations.

OL. LAVAND. "Special."

ESS. LIMONIS. "Special"

1893.

(Imported direct from Sicily.)



PERFUMES. "Special."

SYR. HYPOPHOSPH. CO.

(Neutral and Bright).

Finest Non-Freezing Norwegian Cod-liver Oil (1893). Tasteless Castor Oil. English and Foreign Essential Oils. Extract of Malt and Extract of Malt and Cod-liver Oil. In 8-oz. and 16-oz. Amber Bottles with Artistic Labels.

EUCALYPTUS OIL. "VIRGINIAN" SALAD OIL.

SPECIAL QUOTATIONS TO LARGE BUYERS.

JEWRY STREET, LONDON, E.C.

And NEW BROWN STREET MANCHESTER.

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